



Ca' Foscari  
University  
of Venice

Master's Degree  
programme

in Comparative International  
Relations  
Second Cycle (D.M.  
270/2004)

Final Thesis

**The Impact of Recently Developed  
Military Technologies on Human  
Experience: a Philosophical Dissertation**

**Supervisor**

Ch. Prof. Cesarale Giorgio

**Assistant supervisor**

Ch. Prof. Sara De Vido

**Graduand**

Filippo Schena

Matriculation Number 840346

**Academic Year**

2017 / 2018



## Table of Contents

Abstract .....	4
Introduction .....	13
Chapter 1 .....	15
New Military Weapons: Legal Bases and Issues .....	15
<b>1.1 Introduction .....</b>	<b>15</b>
<b>1.2 International Humanitarian Law: an Overview .....</b>	<b>17</b>
1.2.1 The Roots of International Humanitarian Law .....	17
1.2.2 Armed Conflicts: a Description .....	18
1.2.3 Obligations and Protection: the Addressees .....	19
1.2.4 Main General Principles .....	22
<b>1.3 The Geneva Conventions and its Additional Protocols ...</b>	<b>25</b>
1.3.1 The Geneva Conventions (1949) and Hague Conventions (1899, 1907) .....	25
1.3.2 Geneva Conventions and Additional Protocols of 1977: the Instrument with a Focus on artt. 35 and 36 .....	26
<b>1.4 International Humanitarian Law and International Human Rights Law: Differences and Interplay Relation .....</b>	<b>30</b>
<b>1.5 The International Committee of the Red Cross's Mission: in Particular, Dissemination Activities .....</b>	<b>33</b>
<b>1.6 Legal Concerns about New Technologies .....</b>	<b>39</b>
1.6.1 Definitions: a Terminological Gap .....	39
1.6.2 A Constructive Dialogue between Law and Security: the Remedy to Uncertainty .....	40
1.6.3 Ethics and Law: the Ability to Discriminate .....	42
1.6.4 Responsibility and Attribution .....	44

1.6.5 Cyberspace: Potential Field of Application of the Law of the Commons.....	47
<b>1.7 Conclusions .....</b>	<b>49</b>
Chapter 2.....	52
Military Technologies: a Structural Description.....	52
<b>2.1 Introduction .....</b>	<b>52</b>
<b>2.2 The Combat Drone .....</b>	<b>54</b>
<b>2.3 Cyborgs .....</b>	<b>62</b>
2.3.1 The Structure of Cyborgs.....	62
2.3.2 Case Studies: What Cyborgs Mean Pragmatically.....	64
<b>2.4 Biological and Chemical Weapons.....</b>	<b>67</b>
2.4.1 Biological and Chemical Weapons: General Characters.....	67
2.4.2 Biological Weapons .....	69
2.4.3 Chemical Weapons.....	69
2.4.4 Case Studies: The Vietnam War and Japanese Experiments in Manchuria .....	70
<b>2.5 Cyberwarfare .....</b>	<b>73</b>
2.5.1 Cyberwarfare: a Depiction.....	73
2.5.2 Cyber Espionage.....	78
<b>2.6 Investments in Military and Army: a Global Perspective</b>	<b>81</b>
<b>2.7 Conclusions.....</b>	<b>86</b>
Chapter 3.....	88
The Impact of Recently Developed Military Technologies on Human Experience: a Philosophical Dissertation.....	88
<b>3.1 Introduction .....</b>	<b>88</b>
<b>3.2 Cyberspace: Limits, or no Limits? .....</b>	<b>90</b>
<b>3.3 Technique, Power, Torture .....</b>	<b>100</b>

3.3.1 Technique and Power .....	100
3.3.2 Power and Torture .....	105
<b>3.4 Media and International Humanitarian Law.....</b>	<b>111</b>
<b>3.5 Conclusions.....</b>	<b>120</b>
Final Conclusions .....	123
Bibliography.....	125
Webliography.....	134
Consulted Documents.....	135

## **Abstract**

Le nuove tecnologie militari sono l'oggetto dell'elaborato: in particolare, le armi che nel ventunesimo hanno subito aggiornamenti e modifiche grazie alla rivoluzione dell'informazione, e che stanno incidendo pesantemente sulla vita dell'uomo, comportando cambiamenti più o meno evidenti o significativi all'esperienza umana e alla società civile. Lo scopo sarà così raggiunto: partendo dalla valutazione del quadro giurisprudenziale attualmente disponibile e in vigore, che potenzialmente potrebbe circoscrivere e disciplinare il settore in continua evoluzione della armi militari, di cui si occupa il primo capitolo, passando per l'analisi di alcune armi specifiche, analizzandone caratteristiche strutturali, alcuni casi studio per dare una maggiore concretezza alla trattazione e considerazioni su possibili problematiche che possono nascere, argomento del secondo capitolo, fino ad arrivare al terzo capitolo, dunque alla riflessione filosofica che elabori e approfondisca in modo appropriato punti e problematiche che la ricerca ha sollevato toccando gli argomenti precedenti.

Il primo capitolo, incluse introduzione e conclusione, si divide in 7 paragrafi. E' la sezione che si occupa di tracciare la cornice giurisprudenziale esistente, che è attivata al momento dello scoppio di un conflitto, e individuare le potenziali problematiche che l'argomento trattato può scatenare a causa della sua portata innovativa, per quanto non in termini assoluti. Il primo paragrafo si fonda sul diritto internazionale umanitario: nello specifico, intende fornirne una panoramica come introduzione del tema. Sono descritte le origini, quindi i primi tentativi di codificazione con il Lieber Code, e la nascita del Comitato internazionale della Croce Rossa, in qualità di organizzazione internazionale devota a una serie di attività, di seguito descritte, legate al

corpo legale stesso; fornisce la classificazione dei conflitti armati, essendo tra gli elementi basilari per poter riconoscere uno stato di guerra, quindi l'applicazione del diritto internazionale umanitario, per l'appunto anche detto diritto dei conflitti armati; elenca i destinatari, ovvero sia chi è vincolato a rispettare gli obblighi posti (ovvero gli Stati, i loro organi, i gruppi non statali organizzati e i movimenti di liberazione nazionale) sia chi è depositario dei diritti garantiti (quindi combattenti, inseriti o meno nel conflitto, e i civili); infine, sono delineati discriminazione, proporzionalità, precauzione e il divieto di causare lesioni e sofferenze inutili, ossia alcuni dei principi generali del diritto internazionale umanitario. Il secondo paragrafo, dopo aver posto l'accento sulla differenza tra Le Convenzioni dell'Aia e quelle di Ginevra, si focalizza sulle seconde e sui Protocolli Addizionali del 1977, poiché strumenti basilari del diritto internazionale umanitario. Nello specifico, due articoli particolarmente utili per il soggetto della ricerca saranno analizzati: artt. 35 e 36 del I Protocollo Addizionale. Tali norme regolano l'utilizzo delle nuove tecnologie militari prodotte dopo che le armi sono state sottoposte a un'attenta valutazione, come anche i mezzi e metodi che sono proibiti all'interno di un conflitto armato, in base alle norme vigenti e già menzionate nel paragrafo precedente. Il terzo paragrafo introduce un confronto tra diritto internazionale umanitario e diritti umani: il motivo di tale scelta deriva dal fatto che, occupandosi entrambi della tutela dell'individuo (benché sarà chiaro come siano simili e complementari, giacché il primo garantisce la custodia in tempo di guerra mentre il secondo principalmente in tempo di pace), senza aver presente con chiarezza principi e scopi, potrebbero essere confusi e considerati interscambiabili. Dopo aver messa in evidenza la basilare differenza che il primo è applicato solamente in tempo di guerra mentre il primo è applicato per la maggior parte in tempo di pace, ma con delle eccezioni per i diritti umani fondamentali e inalienabili che valgono pure

in tempo di guerra, saranno presentate somiglianze e differenze rilevanti per una corretta e appropriata applicazione del quadro legale di riferimento. Il quarto paragrafo sarà dedicato al Comitato internazionale della Croce Rossa, dal momento che è a buon diritto considerato garante fondamentale del diritto internazionale umanitario. Tra le molteplici attività in cui è impegnato, compare non solo la supervisione totale sulla corretta applicazione da parte degli Stati, che mantengano un comportamento legittimamente appropriato, ma anche della diffusione delle norme stesse: in particolare quest'ultimo aspetto sarà esaminato, in quanto alla base di un'omogenea e diffusa conformità al diritto vigente. Il quinto e ultimo paragrafo prende in esame alcune problematiche giurisprudenziali, decisive per lo sviluppo della materia, su cui la dottrina ha focalizzato l'attenzione recentemente. Più precisamente: l'assenza di complete e appropriate definizioni di quasi ogni elemento inerente alle nuove tecnologie, che compromette l'elaborazione di un quadro giuridico coerente; la necessità di cooperazione e collaborazione costruttiva da parte non solo degli Stati, ma anche di tutti coloro i quali possono essere considerati esperti e conoscitori delle materie che compongono il colorito e complesso sistema, essendo un settore multidisciplinare ora, e probabilmente ancora di più in futuro; la capacità di operare decisioni discriminate o meno durante un conflitto da parte di armi programmati per essere fino a una certa misura indipendenti, per far sì che siano rispettate tutti gli obblighi fissati dal diritto umanitario; la responsabilità di fronte a una violazione del diritto umanitario, quindi l'attribuzione di un atto compiuto nel caso delle nuove armi controllare da remoto o addirittura attacchi informatici in cui l'anonimato o la falsa identità sono pressoché imprescindibili; la possibilità di considerare il cyberspazio patrimonio comune dell'umanità, con tutte le conseguenze che tale status avrebbe, soprattutto limitazioni di uso e sfruttamento.

Una volta che è stato reso evidente il potenziale quadro giuridico di riferimento, si passa alla descrizione di alcune tecnologie rilevanti, con una considerazione finale sull'atteggiamento generale degli Stati, nel secondo capitolo. La scelta delle armi da descrivere si basa sulle riflessioni filosofiche che le caratteristiche di tali apparecchi avrebbero potuto suscitare, insieme a quanto analizzato nel primo capitolo. Anche il secondo capitolo è composto di sette paragrafi, incluse introduzione e conclusione. Il primo paragrafo si basa sulla descrizione del drone usato come arma. L'analisi verterà su aspetti tecnologici, in cui sarà descritta la struttura dell'arma, presentandone le caratteristiche principali, aspetti economici, considerando i vantaggi finanziari consentiti dalla possibilità di ampliare lo spazio di guerra e allo stesso tempo ridurre l'apporto umano, quasi del tutto, per compiere un attacco, e infine politici, essendo l'utilizzo del drone indissolubilmente legato alle dinamiche contro-terroristiche, in particolare da parte degli Stati Uniti d'America. Saranno menzionati anche gli aspetti che culturalmente portano un cambiamento nella considerazione della guerra, dato che, con l'utilizzo del drone, viene a cadere il rapporto dialettico tra i combattenti e viene invece consolidato il rapporto asimmetrico di potere attaccante-attaccato. Il paragrafo si concluderà con la presentazione del dibattito acceso e ancora aperto sui aspetti negativi e positivi da considerare, e quali sarebbe il caso prevalessero. Il secondo paragrafo è incentrato sul cyborg. Prima di tutto sarà fornita, essendo elementi ben presenti e conosciuti nella cultura pressoché mondiale ma talvolta sovrapposti, la differenza essenziale tra cyborg e robot, affinché non siano confusi. In seguito, saranno descritte le caratteristiche di tale arma, incluse le origini del nome e di conseguenza l'imprescindibile duplice natura organica e tecnologica/meccanica, e le attuali ricerche che in particolare sono eseguite in territorio statunitense da parte della DARPA (Defense Advanced Research Projects Agency), essendoci una particolare

attenzione da parte del governo americano e dalla NASA saranno inserite come casi studio: in particolare, l'istituto sta testando applicazioni e impianti di microsistemi su determinati animali. Il terzo paragrafo si concentra invece sulle armi chimiche e biologiche. Sebbene non siano propriamente delle nuove tecnologie militari, tuttavia, per l'impatto che hanno avuto sulla cultura mondiale nel ventesimo secolo e l'attenzione che stanno catturando attualmente per le loro potenzialità distruttive, sono state inserite nella ricerca. Prima di fornirne la classificazione e due casi studio, rispettivamente le bombe al napalm utilizzate dagli Stati Uniti d'America durante la guerra del Vietnam e gli esperimenti che il Giappone compieva in Manciuria negli anni trenta per testare armi in via di sviluppo, saranno messi in evidenza alcuni tratti caratteristici di questo tipo di armi. Nello specifico, l'accento sarà posto sulla distruzione di massa che sono in grado di comportare e gli effetti sia nel breve sia nel lungo termine, in base ai composti che vengono utilizzati per creare l'arma considerata. Un'arma che può essere utilizzata concretamente o anche solo usata come minaccia, quindi comportare effetti meramente psicologici. Il quarto paragrafo prende in analisi la guerra cibernetica e il cyber spionaggio. Il tema cyber acquista una particolare rilevanza perché ha avuto un grande impatto sulla società da quando ha fatto il suo ingresso, condizionandola notevolmente. La guerra cibernetica si sviluppa parallelamente alla guerra tradizionale, perché avviene in un ambiente diverso, soprattutto giacché non ci sono limitazioni insormontabili, e sviluppata da elementi non perfettamente identificabili, sebbene ragioni e scopi possono essere essenzialmente simili. La velocità con cui la tecnologia avanza e con cui possono essere apportati cambiamenti alla struttura stessa del web, essendo una creazione umana, rendono l'ambiente poco stabile e incerto. All'interno di questo contesto, il cyber spionaggio mantiene obiettivi e approccio molto simili allo spionaggio tradizionale: tuttavia, alcuni aspetti sono enfatizzati dal

'luogo' in cui avvengono, e possono aumentare le probabilità di successo da parte di chi intraprende tale attività. Tra questi, l'anonimato ancora più tutelato e la capacità di insinuarsi in tutto il mondo e in svariate comunità nello stesso momento stando nello stesso posto. Il quinto e ultimo paragrafo si basa sugli investimenti nel settore dell'industria pesante, mantenendo una prospettiva globale, con solo un semplice accenno ai possibili trend che gli Stati possono singolarmente seguire. L'obiettivo che ha portato alla decisione di inserire tale argomento sarà rendere evidente, fornendo una descrizione empirica delle tendenze attuali, come, per quanto siano universalmente riconosciute le implicazioni di un conflitto armato con l'uso di tecnologie potenzialmente estremamente distruttive, non ci sia segno di un rallentamento consapevole: anzi, il caso è quasi il contrario, perché vedremo come si possa parlare di una ripresa della corsa agli armamenti. Sarà chiaro come gli Stati, le cosiddette 'potenze', siano una forza trainante per gli Stati che possiedono meno risorse, in quanto li condizioneranno sull'approccio da avere nei confronti delle armi, della loro produzione, ma anche del loro commercio – che nel complesso risulta ancora molto attivo.

Arrivando al terzo e ultimo capitolo, si cominciano a tirare le conclusioni su quanto esposto in precedenza. La sezione è costruita sull'ampio sviluppo di spunti di riflessione filosofica che trovano origine nei due capitoli che lo precedono. L'obiettivo è rendere consapevole il lettore su quanto ha appena letto, e offrire la possibilità di ragionare sulla contemporaneità e su problematiche, che talvolta sono nascoste o trattate superficialmente, quindi non abbastanza considerate da guadagnare l'attenzione che meritano. Il primo paragrafo tratta la delimitazione nel cyberspace: sarà chiaro come la mancanza di precisi confini influenzi tanto la percezione quanto le modalità di corretto utilizzo degli spazi. Il legame con il primo capitolo, in particolare la

mancanza di una terminologia chiara e specifica, è evidente. Si partirà dalla constatazione che tutto ciò che può essere identificato con la realtà virtuale è una creazione dell'uomo, dal primo all'ultimo elemento costituente: le attività che sono compiute, chi popola una particolare area della rete e la stessa personalità di costoro, sono tutte frutto della creatività umana. Ovviamente, gli unici ostacoli oggettivi alla creatività sono da una parte le universali leggi della fisica, dall'altro le imposizioni che sono date ai programmatori da parte dei capi progetti di cui fanno parte. Si passerà poi alle implicazioni della mancanza di limiti. Nello specifico, saranno prese in considerazione quelle che riguardano la netta spartizione tra sfera pubblica e privata; la divisione tra zone dedicate all'attività militare e quelle per la vita della società civile. Saranno forniti degli esempi pratici che contribuiranno a dare un fondamento empirico allo studio, oltre che a dimostrare come non ci sia solamente una relazione dialettica, ma anche di reciproca contaminazione, essendo i quattro ambiti sfumati l'uno nell'altro. In particolare, WikiLeaks, Edward Snowden e ISIL saranno i casi studio affrontati. WikiLeaks e Edward Snowden punteranno principalmente sull'inquinamento, se così può essere definito, conseguente alla diffusione di notizie; ISIL invece mostrerà come i social media, in particolare Telegram, Twitter e YouTube, verranno strumentalizzati sia per il reclutamento di adepti che per l'organizzazione logistica di gruppi terroristici che di attentati. Il secondo paragrafo avrà come argomenti la tecnica, il potere e la tortura, dal momento che sono indissolubilmente legati tra loro. Tuttavia, l'analisi, per questioni di praticità, dividerà tecnica e potere e in seguito potere e tortura. La tecnica sarà descritta come una capacità totalizzante, poiché l'avanzamento tecnologico consente sia di raggiungere gli obiettivi prefissati che di modificare ogni elemento presente sulla terra, esseri umani compresi. Essendo totalizzante, la tecnica permetterà di ottenere l'onnipotenza. Qui entra in argomento il legame tra potere e tortura.

Infatti, il potere sussiste solamente attraverso il rapporto dialettico tra chi detiene il potere e chi è sottomesso al potere stesso: la manifestazione del potere e del necessario rapporto asimmetrico è la tortura, perché palesa come coloro i quali cercano di ribellarsi al potere, in quanto tale accettato, vero e giusto, stanno combattendo a favore dell'ingiustizia. Dunque, la tortura finisce per essere giustificata sia perché essenzialmente necessaria, sia perché, essendo l'espressione di un potere legittimato, è legittimata di conseguenza. Infine, la considerazione che concluderà il capitolo è l'ipotesi della creazione di una nuova specie dal progresso tecnologico. Sarà l'inizio di un'era post-umana, in quanto gli uomini rischieranno di instaurarvi un rapporto asimmetrico, speculare a quello che ora hanno con gli animali. Il terzo paragrafo si occupa infine del rapporto che i media hanno con il diritto internazionale umanitario. In particolare, si partirà con delle considerazioni generali sul comportamento dei giornalisti e corrispondenti esteri, tramite un confronto col passato, e sulle limitazioni sia soggettive sia oggettive che gli stessi sono costretti a sopportare e che possono comportare pesanti modifiche non solamente all'efficacia della trasmissione delle informazioni, ma anche alla veridicità delle stesse. I limiti oggettivi hanno a che fare per esempio con le risorse finanziarie o con l'ambiente del conflitto armato, in particolare con la pericolosità delle nuove tecnologie. Quelle soggettive invece riguardano le potenziali alterazioni da parte di istituzioni che vogliono esercitare la propria influenza. Ma i media potrebbero acquisire, una volta ottenute le competenze sufficienti e necessarie per farlo, un ruolo fondamentale per la diffusione del diritto internazionale umanitario, dando un utile aiuto al Comitato internazionale della Croce Rossa. Infatti, non solo potrebbero giocare sul fatto che i crimini di guerra siano uno degli argomenti più ricercati dall'opinione pubblica, ma anche sulla possibilità di diffondere in modo sistematico e rapido, grazie alle nuove tecnologie, le notizie. Infine,

un'ampia considerazione sul valore che le immagini, e la fotografia di conseguenza, hanno assunto oggi nel condizionare la percezione di un evento.

Le conclusioni che possono essere tratte dalla trattazione sono molteplici, nonché disposte su più livelli e legate a svariati settori. L'obiettivo di partenza dell'elaborato era cercare le potenziali implicazioni che le nuove tecnologie militari avrebbero potuto avere sulla vita dell'uomo in tutte le sue possibili manifestazioni. I risultati della ricerca sono i seguenti: l'impatto sull'esistenza umana non è stato solo rilevante per le svariate ripercussioni che ha avuto, ma anche, e forse soprattutto, perché mette in discussione l'esistenza umana stessa. Con le nuove tecnologie abbiamo visto l'antropocentrismo affievolirsi, con la conseguente perdita del primato che aveva finora mantenuto senza segni di cedimento. Il limite di tale analisi tuttavia è che quanto detto sinora, che può essere osservabile fino a questo preciso momento, è destinato a non assicurare una solida stabilità: al contrario, in futuro il quadro generale potrebbe modificarsi. In seguito a successivi cambiamenti, che siano economici, sociali, politici, sia a livello nazionale sia internazionale, nuove variabili di cui tener conto potranno entrare in gioco: di conseguenza, un'altra ricerca sarebbe necessaria, seppur adattabile a questa, che ne corregga l'interpretazione.

## **Introduction**

Nowadays, it might be affirmed rightfully, and without big doubts arising about the matter, that technology is one of the major influencing factor of our life, our experience and our culture. Its multilevel and multifaceted impact can potentially change our same perception, either emotional or physical one, of the world we live, with consequent repercussions on the interpretation of the events occurring. This is the very reason why I decided to begin an inquiry on technology: in order to discover which aspects would be affected, and the analysis of the effects themselves. Then, attention focused on the military field due to the very fact that today civil technology, if I am allowed to name as such all the devices the civil society employ in the routine of their daily life, and military technology are very likely not to be easily sharply distinguished: as it will be ascertained next, after a careful reading of the study, any of the tools is not completely integrated in a field on in another, but uncertainty of belonging and blurriness of definition is a permanent issue. It would be of a great interest to conduct a investigation, with necessary empirical evidence to avoid a too theoretical analysis and integrate it with a pragmatic approach, and afterwards realize, with appropriate philosophical reflections, the outcomes. The structure of the thesis will be as shortly enlisted.

The first chapter will introduce the topic providing with the possible legal framework of new military technology, since there are no specific guidelines ruling the matter yet. More precisely, it will be traced the origins of the International Humanitarian Law, it being the current legal body applied to armed conflicts – the context in which military technology are supposed to be employed. Once done so, the basic instruments of the IHL (Geneva Conventions of 1949 and Additional Protocol of 1977) and the international organization responsible for the

branch (International Committee of the Red Cross) will be taken into account. Finally, some issues that have arisen due to the problematic legal conditions will be studied: they will open the debate and offer some useful and stimulating hints to the philosophical dissertation.

The second chapter will turn the attention to the structure and the main characteristics of selected military weapons, in order to provide instances of what 'military technology' means. Those that have been chosen are as follows: the combat drone, cyborgs, biological and chemical weapons, cyberwarfare. Later, a consideration, with a global perspective, about the investments of the States in the military field will be carried out, in order to raise the appropriate awareness about the actual trends. Even this depiction will serve as food for thought and help tackle the philosophical analysis.

The third chapter will extensively develop the issues previously sprung up. In particular, three are the topics the inquiry will deal with. The first is the limits, or actually their absence, of the cyberspace, and the related repercussions on the perception and the recognition of the virtual reality as a consequence. The second is the established reciprocal relation between technique, power and torture: with a special focus on the fact that they are essentially unavoidably knit together. The third is the media and the International Humanitarian Law. Specifically, the role the media currently play both in the dissemination of the war crimes and the knowledge of the provisions regulating them.

## **Chapter 1**

### **New Military Weapons: Legal Bases and Issues**

#### **1.1 Introduction**

This is beginning of the path, the introductory chapter. It aims to provide with an appropriate overview of the legal framework around new military technologies, that is the International Humanitarian Law, as well as the arising issues to tackle. The research has not been easily conducted, due to the lack of precise instruments comprehensively and actionably dealing with the matter. The major concern is that technology advance so quickly that not only are provisions ruling the behavior of belligerent States, on the basis of the means and methods of war, needed, but also they should be constantly updated to include their new production: mostly, they are very likely to be updates of the already existing tools, possibly mixing them with other field of sciences. The chapter will be divided in paragraphs as follows: a general outlook on the International Humanitarian Law; Geneva Conventions and its Additional Protocols; the relation between International Humanitarian Law and International Human Rights Law; the International Committee of the Red Cross; some legal concerns related to existing or future new technologies. In particular, the overview on the International Humanitarian Law (its origins, the armed conflicts, those who are bound to and those who are protected by it) will serve to contextualize the referential body of law for military weapons; depicting the Geneva Conventions and the related Additional Protocols, with a special focus on selected articles, will be extremely useful for providing with the main

legal instrument of the International Humanitarian Law and pillars for the potential evolution of the legal body itself; the comparison between the International Humanitarian Law and International Human Rights Law puts under the spotlight differences and similarities of the aforementioned bodies, sometimes not so well distinguished by the common opinion; the focus on the International Committee of the Red Cross is necessary because it is the major organization dealing with the International Humanitarian Law, also in charge of ascertaining both the compliance of the categories bound to it and the further dissemination; the legal concerns, namely ensuring a precise terminological and behavioral context and appropriately interpreting a correct and lawful adaptation of new tools to the preexisting framework, constitute the most pressing issues to face, and that currently capture the efforts of the scholarship. All the topics enlisted above will shed a clear light on the problems encompassing the current legal framework of the recently developed military weaponry: consequently, the gaps to work on and fill with the most appropriate solutions, after careful operational procedures, are identified.

## **1.2 International Humanitarian Law: an Overview**

### **1.2.1 The Roots of International Humanitarian Law**

International Humanitarian Law's origins date back to the half of XIX century. However, it is necessary to underscore that this starting point corresponds to the pragmatic and effective systematization of the body: until that time, already customs, traditions and habits used to act as behavioral guidelines for belligerent States and their organs. It would be definitely inaccurate assuming the absence of any sort of rule or organization before these efforts: since the very beginning of relations among different communities, there have existed means and methods for providing with a referential, though possibly rough, legal framework. The first attempt of codifying already existing norms related to armed conflicts is the Lieber Code, whose coming into force dates 1863. It is not considered a convention because it was merely applicable to the soldiers of the Union involved in the American Civil War: despite the lack of its international application, it is of great interest for its value in the evolution of the International Humanitarian Law<sup>1</sup>. In 1864, another momentous step has been taken in the history of the body: in fact, it was adopted the Convention for the Amelioration of the Condition of the Wounded in Armies in the Field. This instrument is generally accepted as the founding document of the International Humanitarian Law. It is considered as such because it gave a proper ordered organization to the previously scattered guidelines, which could not be named properly provision. Basically, the codified norms prescribed the protection of both wounded and sick and the personnel responsible for their care<sup>2</sup>. At the

---

<sup>1</sup> International Committee of the Red Cross, *International Humanitarian Law, Answers to Your Questions*, Geneva: Feb. 2012. pp.4, 12, 13

<sup>2</sup> *International Humanitarian Law*, 2012, 12

origins of the current International Humanitarian Law the International Committee of the Red Cross plays also an indispensable role too: in fact, two of the 5 founding members of the committee, those who participated in the ‘Committee of Five’ - which became the International Committee of the Red Cross afterwards – are thought even to be the founders of the contemporary International Humanitarian Law: Henry Dunant, a Swiss businessman, and Guillaume-Henri Dufour, a Swiss army officer. In particular, Mr. Dunant, seeing the dramatic devastation caused by the battle of Solferino while he was travelling Italy in 1859, decided to tell his experience in a book three years later, *A Memory of Solferino*; while, in 1864, Mr. Dufour chaired the diplomatic conference bringing about the adoption of the first Geneva Conventions. They, along with Mr. Gustave Moynier, Louis Appia, Théodore Maunoi, founded the aforementioned international committee (‘Committee of Five’) aiming to deal with wounded soldiers<sup>3</sup>.

### **1.2.2 Armed Conflicts: a Description**

One of the criteria to evaluate, before deciding whether International Humanitarian Law can be lawfully applied or not, is the presence of hostilities: ergo, the breaking out of armed conflicts. For this reason, it is necessary to shed light on this concept. The first feature to mention is the recognition of the state of war has by the belligerent parties: otherwise, no lawful attacks can be thrown<sup>4</sup>. The second characteristic bases on the difference between International armed conflict (IAC) and non-international armed conflict (NIAC) instead. The

---

<sup>3</sup> *International Humanitarian Law*, 2012, 4, 6-9, 11-13

<sup>4</sup> Advisory Service on International Humanitarian Law, *International Humanitarian Law and International Human Rights Law, Similarities and Differences*, International Committee of the Red Cross, Jan. 2003.

former category encompasses a war broken out among states - and even the possibility of the participation of an international organization - and wars of liberation; the latter one includes rebel groups and armed insurgents. However, one of the further requirements is the escalation of tensions up to a certain extent and a sufficient level of organization reached by the belligerent groups<sup>5</sup>. Even though the distinction between the two aforementioned categories is sharp, there might also happen that both an IAC and a NIAC take place contemporarily on the same territory. The situation created is supposed to be analyzed in details, in order to correctly understand how belligerents are related. The study usually bases on the time of their intervention and the siding of the parties throughout the conflict: consequently, the appropriate body will be applied. Starting with the quite obvious, but that cannot be underestimated, consideration that every conflict is bound to the International Humanitarian customary law for the very category it belongs to, while the IACs are regulated by the four Geneva Conventions and the Additional Protocol I, the provisions for NIACs are included in the Common art.3 of the Geneva Conventions and the Additional Protocol II<sup>6</sup>.

### **1.2.3 Obligations and Protection: the Addressees**

Most of the States have ratified both the Geneva Conventions and the Additional Protocols. However, the majority of the included provisions are customary law: therefore, all the States, the international community on the whole, have the duty to respect the provisions of the International Humanitarian Law. Among these, there appear the task of disseminating awareness and knowledge of the International

---

<sup>5</sup> *International Humanitarian Law and International Human Rights Law*, 2003

<sup>6</sup> *International Humanitarian Law*, 2012, 18-21

Humanitarian Law through the Geneva Conventions and the Additional Protocols - as it is prescribed in the art. 1 of the same instruments now mentioned - in order to ascertain a wide and appropriate implementation. Thus, not only does the international community have to directly respect the body, but also do it indirectly, ensuring that other States' compliance. Specifically, the categories to which the International Humanitarian Law is especially direct are States, organized non-States groups and National liberation movements, with the respective obligations<sup>7</sup>.

As a general rule, everyone is entitled to the right to receive protection during an armed conflict. In particular, there are fundamental rights that shall not be neglected even during conflict, without taking the status of the person in that very moment into consideration. They are related to the preservation of the dignity and honor of the human being, and those characteristics possibly composing every multifaceted personality: here are included convictions, beliefs, and religious practices. Furthermore, all the fundamental and inalienable provisions of the International Human Rights Law that have to be respected even during hostilities shall be taken into account<sup>8</sup>: the obligation of human treatment and the prohibition of torture and cruel, inhuman or degrading treatment, with the intrinsic differences in their definitions, are effectively customary law. More specifically, they are *jus cogens*, therefore never derogable<sup>9</sup>. Also, children and women are categories who deserve special attentions, because they are entitled to particular protection and the satisfaction of their needs<sup>10</sup>.

The protective procedure differs on the basis of the identification of the status of the person involved, whether lawful or unlawful combatant

---

<sup>7</sup> *International Humanitarian Law*, 2012, 26, 29, 31, 34

<sup>8</sup> *International Humanitarian Law*, 2012, 26, 28-30, 31, 34

<sup>9</sup> International Committee of the Red Cross, *Customary IHL Database*. Rule 87, 90

<sup>10</sup> *International Humanitarian Law*, 2012, 30, 34

or civilian, and of the category of the armed conflict. As far as the IACs is concerned, there are civilians and combatants *hors de combat*. Civilians, considered as such all those do not partake in conflicts, have the right to be protected by all potentially damaging dangers, see their fundamental rights respected and receive necessary supplies (food, water, basilar medical treatments). In case civilians take up arms, therefore showing through that action the decision of participating actively in the conflict, they become at once a possible target for attacks thrown by the opposite party. However, they - unlawful combatants - cannot be targeted after putting down those arms<sup>11</sup>. Combatants *hors de combat* are combatants instead; therefore, the word entails every member of the armed forces of the belligerent parties. 'Armed forces' means organized forces, groups and units provided with a commander in charge of conducting them during the hostilities. Specifically, combatants *hors de combat* are those who a) surrendered b) have no more the capacity of providing with defense for themselves due the fact that they feel sick or have been wounded c) fall prisoners to another belligerent party – a special status which grant them a certain protection. They legally keep the aforementioned status until they do not decide to escape or take back arms and restart participating in the conflict. Combatants being, they can still be targeted and be affected by the implications of the conflict, although they are out of it<sup>12</sup>. As far as NIACs is concerned, the notion of 'protection' is definitely less articulated: in fact, a detailed classification of the categories is completely absent. Its simplicity is explained by the low States' inclination - remembering that NIACs take place within the territory of a country - to concede the status of combatant, with the related protections needed, to the organized non-State armed groups: therefore, those unlawful forces rebelling against the legitimate

---

<sup>11</sup> *International Humanitarian Law*, 2012, 26, 27

<sup>12</sup> *International Humanitarian Law*, 2012, 27, 28

government. Conversely, protection is consented to all those who do not take part in hostilities, without deeper distinctions about a potential previous involvement<sup>13</sup>.

#### **1.2.4 Main General Principles**

Along with the specific provisions prescribed by the already existing instruments, there are general principles of International Humanitarian Law applied to an armed conflict too: they provide with behavioral guidelines of a wider scope regulating the conduct of all the military operations. The general purpose is, as always reminded, the humanitarian protection under conflicts: in this very case, the category of civilians especially <sup>14</sup>. They have been pragmatically codified by the Protocol I of the Geneva Conventions, but also recognized as customary law of both IACs and NIACs. Those which I am going to write about, since they will be the most useful basing on the purposes and topics of the ongoing analysis, are as follows: Distinction, Proportion, Precaution and Prohibition of superfluous injury and unnecessary suffering. Even though they will be here studied separately one by one, it will be evident that they are reciprocally and constantly interconnected<sup>15</sup>. Let's start with the one mentioned as first, Distinction. It means the obligation to precisely distinguish between the targeted objectives during conflicts, as accurately prescribed by art. 48 of the Additional Protocol I to the Geneva Conventions<sup>16</sup>. It evidently refers to the previous paragraph

---

<sup>13</sup> *International Humanitarian Law*, 2012, 26-30

<sup>14</sup> *International Humanitarian Law*, 2012, 46

<sup>15</sup> *International Humanitarian Law*, 2012, 46

<sup>16</sup> "In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.", "*Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the*

where the difference among persons present on the territory where hostilities are taking place has been delineated. Civilians, as said above, cannot be targeted; civilian objectives cannot be so as well. Solely combatants and military objectives may be hit. The prescription has to be strictly respected, with the only exception in which civilian objectives are, on the contrary, apparently employed for military purposes: in this very case, they completely lose the right of avoidance from being targeted<sup>17</sup>. The discrimination has also to be conducted as far as means and methods is concerned. The customary law prohibits indiscriminate attacks, therefore those attacks thrown by weapons whose nature is indiscriminate. The criteria to determine such an attack, obviously addressed to military objectives, are the absence of certain limits of the effects and the incapacity of their temporally and spatially controlling. With the advent of new weapons, the issue is further complicated by the possible increase of risks linked to the high degree of unpredictability<sup>18</sup>. With regard to Proportionality, it prescribes the necessity to determinate the appropriate size of the attack - at the base of the military advantage that a party aims to gain - by those who are in charge of it before throwing: it is not allowed to provoke exaggerated damage to the objective eventually hit. The idea that such a principle is only available for the lawfully targeted objectives, even though it clearly encompasses the prohibition of outweighing the effects of the attack with repercussions on civilians, is here implied<sup>19</sup>. This principle is tightly related to the Precaution one, because it requires the assessment of potential effects the attack might have. Also, for a complete evaluation, the procedure asks for a discriminate calculation: in fact, in undertaking

---

*Protection of Victims of International Armed Conflicts (Protocol I)*". Geneva, June 8th 1977.

<sup>17</sup> *International Humanitarian Law*, 2012, 46-48

<sup>18</sup> Customary IHL Database Rule 11, 12, 71

<sup>19</sup> *International Humanitarian Law*, 2012, 47

military operations means and methods have to be carefully evaluated. This is fairly essential, in order to avoid hitting civilians or civilian objectives, or, if this could be the case, to keep at minimum the possible damage<sup>20</sup>. Finally, the prohibition of causing superfluous injury or unnecessary suffering<sup>21</sup> will be introduced. On the contrary of what have been stated above, it concerns both civilians and combatants, with a special focus on the latter actually. The nature of the methods and means of war is the criterion upon which a correct evaluation can be conducted. However, although the International Court of Justice has spelled out the universally accepted definition of the term ‘unnecessary suffering’, the scholarship has not reached a real agreement about the ability of a weapon to cause such damage yet<sup>22</sup>.

---

<sup>20</sup> *International Humanitarian Law*, 2012, 48

<sup>21</sup> “a harm greater than that unavoidable to achieve legitimate military objectives”, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I.C.J. Reports, 1996. p.257

<sup>22</sup> *International Humanitarian Law*, 2012, 48

## **1.3 The Geneva Conventions and its Additional Protocols**

### **1.3.1 The Geneva Conventions (1949) and Hague Conventions (1899, 1907)**

The Geneva Conventions and the Hague Conventions are the more eminent instruments constituting the base of the body currently named International Humanitarian Law or International Law of Armed Conflicts. They were born as two separated instruments and branches effectively ruling the same framework with similar provisions: however, since the entrance into force of the Additional Protocols of 1977, the scholarship begun considering them as unique pragmatically talking, considering the fact that they join the two providing with a complementary integration<sup>23</sup>. The Advisory Opinion of the International Court of Justice<sup>24</sup> confirms this practice<sup>25</sup>. If the topic is studied historically, it is clear that the Hague Law regulated the belligerent States, providing with all those legal obligations aiming to oblige a lawful behavior or rights granting appropriate protection; while the Geneva Law focuses on the protection of all those persons possibly involved in hostilities, they being lawful combatants or civilians living in the territories where the armed conflict is in progress<sup>26</sup>.

---

<sup>23</sup> *International Humanitarian Law*, 2012, 5

<sup>24</sup> “These two branches of the law applicable in armed conflict have become so closely interrelated that they are considered to have gradually formed one single complex system, known today as international humanitarian law. The provisions of the Additional Protocols of 1977 give expression and attest to the unity and complexity of that law”, *Legality*, 1996, 256

<sup>25</sup> N.Ronzitti, *Diritto internazionale dei conflitti armati*, 4. Ed., Torino: Giappichelli, 2011. p.18

<sup>26</sup> *International Humanitarian Law*, 2012, 5

### **1.3.2 Geneva Conventions and Additional Protocols of 1977: the Instrument with a Focus on artt. 35 and 36**

After providing with a clear distinction between the two fundamental instruments of the complex system that International Humanitarian Law is, it is now necessary shed light on the Geneva Conventions only: in particular, to some articles of theirs deserving our attention to deal with the subject of the research. Before arriving at the Geneva Conventions of 1949, which is believed the core of the International Law of Armed Conflicts, the instrument has been adopted for the first time in 1864 (The Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field): then, it underwent a series of updates (1906 and 1929) in order to keep up with both the constant and uninterrupted advancement of military technology and the nature of the war itself<sup>27</sup>. Especially, the first, the second, and the third convention (each one specialized on a precise matter) represent an effective evolution of the body itself; while the fourth one, whose subject is the protection of civilians during conflicts, has been newly drafted<sup>28</sup>. In 1977 there have been added two Protocols, respectively dealing with an integration of the conventions as for protection and humanitarian aid and the NIACs, in order to provide with an even more specific and instrument updated to the social, economic and political changes the international community was experiencing<sup>29</sup>. On the whole, the Geneva Conventions, through its provisions, aim to create a balanced and fair equilibrium between military and humanitarian necessities. Before going ahead, for a correct understanding of the topic under analysis it is of fundamental importance stressing the difference between International

---

<sup>27</sup> *International Humanitarian Law*, 2012, 22

<sup>28</sup> *International Humanitarian Law*, 2012, 24

<sup>29</sup> *International Humanitarian Law*, 2012, 23, 24

Humanitarian Law, the *Jus in bello*, and *jus ad bellum*. While the first regulates the behavior of the belligerent parties, they being states, non-state groups or international organizations, the second one used to prescribe the right to undertake war. Since the adoption of the United Nations Charter, the right to wage war has been neglected, apart from some exceptions as appropriately proscribed in the UN Charter itself: despite their importance, here they are not required to be enlisted, because mentioning the limits posed is sufficient for the subject of the analysis<sup>30</sup>.

Now, with the help of the database of the International Committee of the Red Cross, I will study artt.35<sup>31</sup> and 36<sup>32</sup> of Additional Protocol I. They prescribe a precise belligerents behavior related to weapons whose employment is allowed in any armed conflict: thus, they are particularly meaningful for the theme of the inquiry. Starting with the first provision, it specifically rules to what extent means and methods of military operations, namely in the employment of weapons, are permitted. Their very nature has to completely avoid any “superfluous injury or unnecessary suffering”: the International Court of Justice<sup>33</sup> further recalls the prohibition of weapons whose employment possibly overcomes these requirements. The effects, albeit their unpredictability, here taken into account clearly refer to the principle of proportionality

---

<sup>30</sup> *International Humanitarian Law*, 2012, 6, 8, 9

<sup>31</sup>“1. In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.

2. It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.

3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.”, “*Protocol Additional*”, 1977, 30

<sup>32</sup> “In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party.”, “*Protocol Additional*”, 1977, 30

<sup>33</sup> *Legality*, 1996, 238

and the category of combatants, since the employment of a weapon is already recognized. However, there is only a general indication: a complete list has not been given. Cases can be found browsing military manuals, official statements and the practice of States. This is the reason why heterogeneity, composed of manifold views about the direct illegality of a precise category of weapons or the necessity of treaties/customary law to do so, remains<sup>34</sup>. As far as the second provision is concerned, the prescription is the assessment of the legality of newly produced weapons: it is supposed to include structural elements and all the necessary procedures to their correct functioning. Even though the provision is directly addressed to the weapons used by the State that even produced them, actually the article is supposed to include weapons destined to export activities too. There are no specific guidelines about the procedure, because the choice is fully delegated to the States: it depends on the means and useful resources at their disposal at the moment of the evaluation itself. The only minimum requirement is to carry it out, in quality of obligation, and set the limits beyond which a violation could occur, also on the basis of the already existing prohibitions<sup>35</sup>: as a result, it is observable a high degree of diversification. It is highly recommended to conduct an as complete as possible procedure, comprehensive and multi-sectoral reasonably, before the pragmatic employment<sup>36</sup>: however, since possible modifications and updates might be applied to the structure of the weapon, a new or updated assessment is needed primarily when the configuration itself could change significantly<sup>37</sup>. Further debates about the implementations of the same article are

---

<sup>34</sup> Customary IHL Database, Rule 70

<sup>35</sup> Advisory Service on International Humanitarian Law, *New Weapons*, International Committee of the Red Cross, Nov. 2001.

<sup>36</sup> *New Weapons*

<sup>37</sup> V.Boulainin, *Implementing Article 36 Weapon Reviews in the Light of Increasing Autonomy in Weapon Systems*, in "SIPRI Insights on Peace and Security", No. 2015/1, Nov. 2015. p.5

underway currently: it is believed that cooperation and collaboration among States, with the consequent sharing of information, data and resources, might be fundamental. They might allow both a higher level of compliance, since ratifiers are not completely ascertained to respect the provision, and to grant those who do not possess the minimum necessary means an exhaustive mechanism<sup>38</sup>. Moreover, transparency will be more evident, because ratifiers will indirectly establish a sort of reciprocal supervising process of compliance, all being aware of others' behavior. The issues challenging the scholarship are the uninterrupted and constant evolution of technology, with all its new and complex features, as well as the lack of precise definition of newly technologies, a concern about which I will write more extensively later<sup>39</sup>.

---

<sup>38</sup> Boulanin, 2015, 1-4, 7

<sup>39</sup> Boulanin, 2015, 17, 18

## **1.4 International Humanitarian Law and International Human Rights Law: Differences and Interplay Relation**

The very distinctive trait of the International Humanitarian Law, namely the necessary condition for its application, is the humanitarian consequences hostilities usually provoke: in fact, without a proper knowledge of the matter, it is acceptable mistakenly confusing the aforementioned body with International Human Rights Law. Essentially, it is a similar body, because both of them concern about persons, but looks at the International Law with a different though complementary point of view<sup>40</sup>: the International Humanitarian Law begins to be applied when wartime can be pragmatically recognized by belligerent states, and ascertains parties involved to accurately respect the limits imposed on the conduct of warfare; the International Human Rights Law, instead, though it might be correctly applied in wartime as well, is mostly applicable peacetime, taking care about granting every person defined as such the rights they deserve. Moving to the derogability of the body, the International Humanitarian Law is not derogable; on the contrary, the International Human Rights Law, in case of public emergency, is proportionally derogable. The just mentioned derogability cannot be fully considered, because the fundamental human rights shall be granted with no exceptions<sup>41</sup>. If our attention is now focused to the categories protected by the bodies, International Human Rights Law protects all persons; International Humanitarian Law only protects all those who a) took part in the war, b) are no more combatants, c) are rightfully considered civilians. The categories above received their protection from the four Geneva Conventions of 1949 and the Additional Protocol of 1977,

---

<sup>40</sup> *International Humanitarian Law and International Human Rights Law, 2003*

<sup>41</sup> *International Humanitarian Law and International Human Rights Law, 2003*

in which each instrument address to a specific category<sup>42</sup>. As far as the organs bound is concerned instead, the International Humanitarian Law rules States and non-State actors of armed conflicts behavior; while the International Human Rights Law deals with governments and individual, with an open debate whether even the non-State actors should be included or not<sup>43</sup>. Within the International Humanitarian Law it is necessary to remind that, although it is the States who are bound, the obligations fall even on individuals or organs of the States considered criminally responsible for committing the breach of the International Law - and potentially war crimes. When it is individuals who commit violations of the International Human Rights Law, existing provisions state that they are even provided with criminal responsibility, and, as a result, possibly accountable for international crimes<sup>44</sup>.

It is of great interest studying also the interplay relation between these two bodies, they being interconnected to a considerable extent. If we pay attention to the respective origins, it is indisputable that they underwent a peculiar and separated development: while the International Human Rights Law started catching the attention of States and scholarship after the end of the Second World War, when the UN Charter was written, the International Humanitarian Law is a body whose codification dates back to the second half of the XIX century. However, it is highly evident, looking at the practice of states, that some of the provisions composing International Human Rights Law come from International Humanitarian Law<sup>45</sup>: it is a matter of fact that recent instruments contain both of them<sup>46</sup>. Not only are they complementary in their nature, but they conflict sometimes too – which manifestly mirrors

---

<sup>42</sup> *International Humanitarian Law and International Human Rights Law*, 2003

<sup>43</sup> *International Humanitarian Law and International Human Rights Law*, 2003

<sup>44</sup> *International Humanitarian Law and International Human Rights Law*, 2003

<sup>45</sup> *International Humanitarian Law*, 2012, 36

<sup>46</sup> *International Humanitarian Law and International Human Rights Law*, 2003

their singular evolution. It is the Advisory Opinion of the International Court of Justice that provides with the customary law ruling their relation: in fact, it is stated that, during armed conflicts, International Humanitarian Law is *lex specialis*, while International Human Rights Law is *lex generalis*. The former prevails hence <sup>47</sup> <sup>48</sup>. The final consideration, enouncing a common element the bodies have, is that both the International Criminal Court and the ad hoc International Criminal Tribunals have jurisdiction over violations of their provisions<sup>49</sup>.

---

<sup>47</sup> “*lex specialis derogat generali*”, <[https://www.trans-lex.org/910000/\\_/lex-specialis-principle/](https://www.trans-lex.org/910000/_/lex-specialis-principle/)>

<sup>48</sup>*International Humanitarian Law*, 2012, 41 and *Legality*, 240

<sup>49</sup> *International Humanitarian Law and International Human Rights Law*, 2003

## **1.5 The International Committee of the Red Cross's Mission: in Particular, Dissemination Activities**

The mission statement<sup>50</sup> of the International Committee of the Red Cross, international organization founded in 1876, asserts its primary focus on humanitarian activities. According to the provisions of the Geneva Conventions of 1949 and its Additional Protocols of 1977, these tasks are addressed to all those persons potentially involved in an armed conflict: there are included lawful combatants or no longer ones, civilians and its delegates too<sup>51</sup>. However, the presence of hostilities is not the *conditio sine qua non* for offering its services: in fact, in case that no armed conflicts are in progress, the International Committee of the Red Cross is only allowed to offer its services without interfering with the government of a State<sup>52</sup>. The manifold activities the organization is allowed to carry out are complementary each other: they have to provide with a comprehensive action covering every possible gap in the States' conduct potentially causing minimum unnecessary suffering to persons spread in the territory where the armed conflict is taking place<sup>53</sup>. Their coordination points at the consolidation of the International Humanitarian Law, because the more the body is strengthened, the higher is the likeliness of universal security. By the same token, the constant constructive dialogue between all the parties and stakeholders is crucial, as well as the access to areas occupied by conflicts<sup>54</sup>. Among the tasks, it may be enlisted the promotion and guarantee of International Humanitarian Law, to ascertain the respect of the provisions the body

---

<sup>50</sup> "The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance.", <<https://www.icrc.org/en/mandate-and-mission>>

<sup>51</sup> *International Humanitarian Law*, 2012, 88, 89

<sup>52</sup> *International Humanitarian Law*, 2012, 88

<sup>53</sup> *International Humanitarian Law*, 2012, 89, 90

<sup>54</sup> *International Humanitarian Law*, 2012, 89

encompasses; the protection and assistance of the victims of hostilities; the dissemination of International Humanitarian Law notions to raise awareness and provide with relevant knowledge across the world communities; the support to States for an easily domestic implementation. Once ensured the pragmatic organization of the frame, it has to constantly monitor States behavior, primarily their respect of the obligations International Humanitarian Law has given. In order to offer a deeper understanding of the protecting activities the International Committee of the Red Cross conducts, it is essential to underscore that the scope is to ensure a nearly full protection: at least, it has to mitigate the exposition to dangers for all the people who did not take active part in the conflicts, or that are no longer involved in them. It is vital to listen to their voices carefully, for an as much as complete acquisition of facts, of abuses and all the other breaches of the International Humanitarian Law<sup>55</sup>. Also, with the help of well-detailed reports, attention on the violations is supposed to be caught and awareness to be developed, for a clear and in-depth overview of a specifically considered context. As for assisting duties, they are necessary to preserve human dignity and lives. Since the matter to deal with is the very assistance, it is indisputable to observe that such activities concern the reaction phase: after the breaking out of a conflict, although they foresee the provision of essential services such as food, water, medicines and primary health-care, lowering the exposure to potentially damaging dangers is the ever-present shrouded goal<sup>56</sup>. Now I only mention the dissemination of information about International Humanitarian Law the International Committee of the Red Cross took charge of, particularly through the Advisory Service, because I will touch on it extensively shortly. Pragmatically, it provides with legal guidance to States, in order to knock

---

<sup>55</sup> *International Humanitarian Law*, 2012, 88-92

<sup>56</sup> *International Humanitarian Law*, 2012, 89, 90

down the wall of ignorance, a meaningful impediment for the full application of International Humanitarian Law<sup>57</sup>. Moving to the monitoring activities, they are especially meaningful because get the International Committee of the Red Cross informed about the treatment and conditions of persons within belligerent States: in case of misbehavior, mistreatment or misinterpretations of International Humanitarian Law by the States, the International Committee of the Red Cross is permitted to deliver confidential representations to the appropriate authorities<sup>58</sup>. This confidential status is perfectly in line with the neutrality and impartiality enounced in the mission statement of the organization: nevertheless, under certain unavoidable circumstances, the allowance of expressing public denunciations is available too<sup>59</sup>. Finally, International Committee of the Red Cross plays also an active role in following and supporting the progressive development of the International Humanitarian Law. It is entitled to drafting texts and later submitting them to diplomatic conferences, where they will be discussed among the interest parties, who will apply the necessary modifications in order to achieve the final document prescribing and proscribing precise norms<sup>60</sup>.

Not only is International Committee of the Red Cross responsible for providing necessary services during hostilities, as the Statute claims: but also for the dissemination of the International humanitarian Law with all its provisions, in order to ascertain interested awareness, appropriate knowledge and universal compliance by the States, pinning security as ultimate goal. By disseminating the notions of International Humanitarian Law, the further purpose is first to instill the acceptance of both the humanitarian aid and law, in order to facilitate the

---

<sup>57</sup> *International Humanitarian Law*, 2012, 88-90

<sup>58</sup> *International Humanitarian Law*, 2012, 90, 91

<sup>59</sup> *International Humanitarian Law*, 2012, 91

<sup>60</sup> *International Humanitarian Law*, 2012, 88-92

humanitarian action, at the very base of its commitment; and secondly, pose limits to the potential breaches of the law, softening the conduct of the States by clarifying rules of behavior. The dissemination of information is even stated in its Statute<sup>61</sup> and Res. 21 of The Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts, Geneva, 1974-1977: it explicitly invites the International Committee of the Red Cross to plan conferences, seminars, and the most appropriate materials in order to spread the knowledge and teach. Also, it has to grant States the necessary services to do so as well<sup>62</sup>. The dissemination is supposed to be carried out mostly off war, because its scope is eminently preventive, in order to avoid the very breaking out of conflicts<sup>63</sup>. One of the means to provide with it is the general education, even with the help of governments. It is particularly addressed to those who are chiefly touched by it, such as the military, legal and medical personnel, the staff of organization involved in the field, and the youth, because the integration of International Humanitarian Law's principles in the conventional educative path would be extremely efficient unquestionably. Ideally, the procedure would be first giving an appropriate expertise to the personnel who need more the body; and secondly, those are supposed to spread it extensively, especially among the people with a lack of expertise and professionalism and where raising awareness about the lawfulness of International

---

<sup>61</sup> art. 5.2 g): "to work for the understanding and dissemination of knowledge of international humanitarian law applicable in armed conflicts and to prepare any development thereof", *Statutes of the International Red Cross and Red Crescent Movement*. Geneva, 1986.

<sup>62</sup> International Committee of the Red Cross, Res. 21, *Dissemination of Knowledge of International Humanitarian Law Applicable in Armed Conflicts*, 55th Plenary Meeting (7 June 1977), in *Protocols Additional to the Geneva Conventions of 12 August 1949*, Geneva, 1977, pp.106-07.

<sup>63</sup> W.V.Dunlap, *Dissemination and International Humanitarian Law in Modern Social Conflict*, in J.Carey, W.V.Dunlap, R.J.Pritchard (eds.), *International Humanitarian Law: Challenges*, Ardsley [New York]: Transnational Publishers, 2004. p.19

Humanitarian Law is crucial<sup>64</sup>. Recently, the dissemination activities have also been included in the humanitarian aid operations - named operational dissemination - as it is seen a truly highly effective method: the very reason behind the choice consists in constantly keeping up to date about both the fast advancement of technology and the progressive changing of warfare's nature<sup>65</sup>. The aforementioned concern came into consideration due to the new characterization of wars. As Jean-Luc Chopard claims, currently tensions within the state are at the very origins of most of the conflicts arising, whose causes are usually related to identity's issues. Inside the state being, it is of vital importance to teach all the citizens about sharply distinguishing between combatants and civilians, so between those who are lawfully taking part in the hostilities, and those who cannot be targeted as objective. This is the very reason why the dissemination has become a top priority<sup>66</sup>. International Committee of the Red Cross' s approach to dissemination has to be separately considered as follows: before the breaking out of a conflict; during conflict; after the conflict, so in peacetime. Obviously, interventions' nature corresponds to the very time when they are conducted<sup>67</sup>. In the first scenario, polarization of the parties and disorder are remarkable. International Committee of the Red Cross aims consequently to call for ethical and cultural values with the help of law personnel and political authorities, pointing at the consideration that International Humanitarian Law, a legal background belonging to the international community on the whole without discriminating any sub community it is composed of, is universally recognized. Eventually, the scope is to reach the implementation through preventive activities<sup>68</sup>.

---

<sup>64</sup> Dunlap, 2004, 20

<sup>65</sup> Dunlap, 2004, 21

<sup>66</sup> Dunlap, 2004, 21, 22

<sup>67</sup> Dunlap, 2004, 23

<sup>68</sup> Dunlap, 2004, 23

Moving to the second scenario, hostilities are effectively observable: therefore, not only does the dissemination has to be assessed as preventive, in order to avoid every escalation of tensions or mistreatment of persons, but even operational, with short-term goals – aiming to find pressing solutions. Here, help through services provided by countries would be very much appreciated. Due to the delicate situation originated, it is highly complicated to conduct evaluative procedures, and possibly no effective results might rise as a consequence<sup>69</sup>. Finally, once the third scenario has to be taken into account, the frame is theoretically and pragmatically similar to the initial one, because preventive operations are to be carried out: however, it is its very nature that differs. The context has changed to the extent that the territories have experienced hostilities, and the dissemination activities have to acknowledge it, as well as the effects of the armed conflict: therefore, the approach cannot be totally identical. The new scope is now to keep peace and stability, avoiding all those potential elements causing conflict<sup>70</sup>.

---

<sup>69</sup> Dunlap, 2004, 23-25

<sup>70</sup> Dunlap, 2004, 23, 25, 26

## **1.6 Legal Concerns about New Technologies**

### **1.6.1 Definitions: a Terminological Gap**

The basilar starting point for building a relevant legal architecture is the clarity of elements in need of regulation. With the previous statement, the accurate explanation of the characteristics through a proper definition is effectively meant. In case this requirement cannot be satisfied, the difficulty firstly in assuring the aforementioned framework and secondly in achieving a correct and universal implementation is higher and higher. There might not be drawn a conspicuous inventory of allowed behaviors appropriately ruled by respective norms for States<sup>71</sup>. This is the very context in which the new military weaponry is bound currently, for several reasons that will be explained shortly. It is of widespread awareness that no precise definitions, generally or universally accepted, have been spelled out: ergo, an accurate characterization is absent, even though not completely, but beyond doubt to a certain extent<sup>72</sup>. An even more controversial issue is that recently developed tools are still under testing procedures, thus they have neither any final concrete exoskeleton nor potential known effects. The high rapidity of advancing new technologies have further complicates the situation, because new or updated characteristics of a specific weapon might be constantly added and as a result they risk creating a partially new configuration, with the need for a consequent innovation of the enclosed terminology. It appears as an ever-increasing vicious circle causing the avoidance of setting precise lexical (and consequently legal)

---

<sup>71</sup> G.L.Dyndal, T.A.Berntsen, S.R.Johansen, *Autonomous Military Drones: No Longer Science Fiction*, in "NATO Review", July 28th 2017.

<sup>72</sup> Dyndal, Berntsen, Johansen, 2017

limits<sup>73</sup>. The statement of the International Committee of the Red Cross is exemplary in this case. In fact, it claims that International Humanitarian Law may be applied to new weapons and technological developments. Such a statement comes from the very fact that the humanitarian consequences are the criterion establishing the implementation of the International Humanitarian Law<sup>74</sup>. However, a terminological issue remains: in fact, although the legal body is a solid base, in order to build a coherent structure upon it, a preventive evaluation in order to assess the necessity of some integrations or implementations and enriching the actual frame is essential<sup>75</sup>.

### **1.6.2 A Constructive Dialogue between Law and Security: the Remedy to Uncertainty**

As it has been ascertained, nowadays the means of warfare entering the battlefield are potentially highly destructive, adding even unexpected effects. This is the reason why, in order to succeed in properly applying the relevant legal body, a regulation for a lawful protection of every person is needed<sup>76</sup>. Moreover, the international law being tightly linked to the maintenance of international balance and security, it is dramatically important to provide with such a framework in the short-term<sup>77</sup>. What is currently written is evidently related to the topic dealt with in the previous paragraph and the one that is going to be touched in paragraph 6.4: the terminological precision carries to the definition of the framework, and behavioral guidelines become at disposal for

---

<sup>73</sup> Dyndal, Berntsen, Johansen, 2017

<sup>74</sup> D.Garcia, *Future Arms, Technologies, and International Law: Preventive Security Governance*, in “European Journal of International Security”, vol.1, part 1, 2016, pp.94–111. p.101

<sup>75</sup> Garcia, 2016, 105

<sup>76</sup> Garcia, 2016, 94

<sup>77</sup> Garcia, 2016, 110

assuring security across the world<sup>78</sup>. Since security has entered the topic, it is supposed to be quite obvious that the United Nations play a vital role. In fact, it would be truly advisable that collaboration among States for the drafting of rules upon cybernetics happens within the international organization, neutral forum where tensions may be kept under control lowering the probability of tension's escalations<sup>79</sup>. As a matter of fact, Garcia supports the necessity of establishing preventive security governance. It will facilitate the articulation of a clear architecture, built on the constructive cooperation of a series of experts in relevant field here interconnected: afterwards, the security governance framework itself will grant to fill the gaps potentially affecting the multilateral cooperation among States in complying with the legal body. Working together by sharing the specific expertizes they mastered, the continuous confrontation through fruitful debates will serve to provide with a multilevel and multi-sectoral analysis: eventually, it will end up with a comprehensive, pragmatic and actionable work, extremely helpful for planning coherent and pertinent governance<sup>80</sup>. On the other hand, this is merely a theoretical work that would be only able to anticipate the potential situation created at a later time, because the consequences will be the sole criterion of evaluation for ultimate provisions. Since the mixture of a plurality of fields structurally characterizes the majority of new technologies - it is sufficient to mention cyborgs, composed by a biological component and an engineering one – multilateral cooperation is of particular importance<sup>81</sup>. Finally, in order to pragmatically show the correlation linking law, weapons and security, let's figure that they may be ideally represented circularly disposed: reciprocal forces influence one another following a sort of knockdown effect, with the State set in the

---

<sup>78</sup> Garcia, 2016, 94, 96, 110

<sup>79</sup> Garcia, 2016, 95, 100

<sup>80</sup> Garcia, 2016, 95, 96, 110

<sup>81</sup> Garcia, 2016, 95, 110

middle. Law will regulate the use of weapons, and the proper use of weapons will assure security; security, as a consequence, will facilitate the implementation of the law; the State stays in the middle of this hypothetical image, because it is influenced by/influences the three elements all<sup>82</sup>.

### **1.6.3 Ethics and Law: the Ability to Discriminate**

In the very context of new military weapons, law and ethics, especially due to the fact that tools are taking distance from their human controller step by step, intertwines very much. Even though at a first sight these two fields could be supposed to be separated, when it comes to the decision-making they could not be more related<sup>83</sup>. One of the top concern on which the scholarship is focusing attention today is the following issue: to which extent the decision cycle could be enlarged – including the autonomy of the weapon - and consequently which the required place of human presence, both spatially and temporally, is. Due to the delicacy of the matter and the absence of a constant frame, a well-detailed and in-depth analysis is merely compulsory: however, since it is highly improbable that circumstances repeat, each case has to be studied in its singularity, taking all its constituting elements into consideration<sup>84</sup>. After the consistent elaboration of the final framework, the influencing factors will be clarified, and the proportion of the decision-making will appear evidently, though a series of tentative applications of law might be necessary for an accurate multilevel perception. This is the reason why ethical considerations would be extremely useful: they will help lighten

---

<sup>82</sup> Garcia, 2016, 110

<sup>83</sup> Dyndal, Berntsen, Johansen, 2017

<sup>84</sup> Dyndal, Berntsen, Johansen, 2017

grey areas<sup>85</sup>. As it might be intuitive basing on the research until now developed, the decision cycle is consequentially linked to human interpreting and discriminating abilities: in case humans will be taken out of the battlefield, there is no perfect predictability about new technologies respect of the general principles of distinction and proportionality, never derogable under any circumstance<sup>86</sup>. Furthermore, every commander is supposed to reasonably acts in good faith: therefore, although leeway for discretion is left in ascertaining the information collected, the expertise they mastered is entrusted. This is of remarkable importance for those facts requiring an appropriate elaboration of data, since they cannot be clearly defined and a precise and quick action could not be taken with certainty. In these very cases, even though the weaponry has all the technical abilities to take a decision, are they sufficient to take into account all the feasible precautions and assess that a potential attack is lawful, therefore determining discrimination? The majority of the scholarship is skeptical: they believe that human consciousness, reasoning and discretion would be needed<sup>87</sup>. Thus, humans do not appear perfectly exchangeable with weapons within the law. On the other hand, looking at the issue with a complementary but divergent standpoint, the advantage machines could bring is the nearly perfect consistency to what they have been programmed for. If provisions of *jus in bello* have been put into the software at the base of their functioning, their deployment is very much likely to meet the requirements more strictly; also, they would be highly probably fully informed about data and facts. However, despite all, the possibility of technical failure is always present<sup>88</sup>. The lack of humanity may turn into an advantage too, because the decision-making process will not be

---

<sup>85</sup> Dyndal, Berntsen, Johansen, 2017

<sup>86</sup> Dyndal, Berntsen, Johansen, 2017

<sup>87</sup> Dyndal, Berntsen, Johansen, 2017

<sup>88</sup> Dyndal, Berntsen, Johansen, 2017

blurred by feelings coming up<sup>89</sup>. Finally, taking the opinions of the scientific community, the technical expert of the topic, into consideration would be certainly useful. The common point of view is that the total absence of human intervention is very likely to bring about high stakes in perspective: therefore, in case that no human control is granted up to a determined extent, the weapon involved should be prohibited or banned beyond doubt<sup>90</sup>. On this point, the scientific fully agree with the epistemic community, because both of them honestly believe that each meaningful decision should not be delegated to machines under no circumstances<sup>91</sup>.

#### **1.6.4 Responsibility and Attribution**

The issue that I am about to deal with might be considered a mash up of the previous paragraph 6.1 and 6.3. In fact, authorship and attribution of responsibility of a breach come from both the definition of the element protected by the provision violated and the organ to which the responsibility would be attributed: therefore, the one who stays behind the decision-making process<sup>92</sup>. Pragmatically, the Law of the State Responsibility asserts that a breach of the International Law consists in a wrongful act committed by a State or an organ of theirs; legal consequences will follow the violation or violations; finally, the procedure ends with proportionate and legal reparations. If the elements are not precisely delineated and defined, the attribution of responsibility remains blurred<sup>93</sup>. As far as the new military technologies is concerned, the unclearness of the context is caused by the absence of a definition of

---

<sup>89</sup> Dyndal, Berntsen, Johansen, 2017

<sup>90</sup> Garcia, 2016, 99, 100

<sup>91</sup> Garcia, 2016, 100

<sup>92</sup> Garcia, 2016, 97, 104

<sup>93</sup> Garcia, 2016, 94, 95, 104, 110

attack, therefore whether it might be included in the International Humanitarian Law and regulated by the provisions composing the body itself or not<sup>94</sup>. There is no any notion of the lawfulness of the attack itself too<sup>95</sup>. Another constituting element of the frame necessary to activate the International Humanitarian Law is the presence of hostilities. Currently, there is no any precise definition of conflict. Out of conflicts, when the presence of belligerent parties cannot be ascertained with clarity, the International Humanitarian Law cannot be the legal base, because the appropriate body is International Human Rights Law. As a result, even the perfect distinction between military and civilian is not carefully provided at any extent<sup>96</sup>. In order to give a more pragmatic example of the difficulties in such a definition, web and cyberspace may be taken into account. In cyberspace every person is allowed to create a profile with no references to his real and true identity. Each of us can provide with fully invented personal information pretending someone else. Anonymity is a double-edged sword: it is extremely useful to protect the identity of those who do not want to spread too intimate details about their own life; however, it consents, to people who do not act in good faith, to employ an accurate selection of information and achieve malicious purposes previously set. Accountability is even further complicated, with neither a certain identification of the attacker and a delimitation of the battlefield: International Humanitarian Law cannot be with any certainty applied hence. Also, since the structure of new military technologies usually results from computer engineering, setting the organ at the base of the decision cycle, browsing among hardware, software and their manufacturers, the military commander and the soldier or machine launching the attack, is dramatically hard<sup>97</sup>. Looking

---

<sup>94</sup> Garcia, 2016, 94-96, 110

<sup>95</sup> Garcia, 2016, 95, 107, 109

<sup>96</sup> Garcia, 2016, 94-96, 102, 106, 110

<sup>97</sup> Garcia, 2016, 95, 96, 102

at the context depicted above, we seem to be witnessing a sort of responsibility vacuum, where everybody and contemporarily nobody might be considered accountable for a specific action. The complexity of the context gets unavoidably along with the progressive lowering of the sense of ethics, morality and responsibility, and draws to take on war with few concerns. Once awareness has been raised about the fact that the identity may be easily concealed behind the lack of legal guidelines, those at the top of decision-making possibly might take action with a smoother decisional process, implications being uncertain<sup>98</sup>. However, regardless of the identification, side effects of the weapon are bound to provoke damage: the precise amount, due to potential technical failures coming up, cannot be ascertained until they are concretely observable though. Therefore, since the current universal trend is leaning on new technologies progressively more, the delegation of tasks, if occurs, is crucial<sup>99</sup>. A final as well as necessary consideration to end the paragraph and draw relevant conclusions about the topic is about the Martens Clause<sup>100</sup>. This provision has been originally included in the Hague Conventions, and then repeated across the next legal instruments to ensure the importance of maintaining the principle of humanity even during conflicts<sup>101</sup>. Moreover, it has been declared customary law thanks to the Advisory Opinion of the International Court of Justice<sup>102</sup>. The content of the norm deals with the public conscience, common sense and

---

<sup>98</sup> Garcia, 2016, 96, 97, 100, 104,

<sup>99</sup> Garcia, 2016, 97, 99,

<sup>100</sup> “Until a more complete code of the laws of war is issued, the High Contracting Parties think it right to declare that in cases not included in the Regulations adopted by them, populations and belligerents remain under the protection and empire of the principles of international law, as they result from the usages established between civilized nations, from the laws of humanity and the requirements of the public conscience”, Preamble, “*Convention (IV) Respecting the Laws and Customs of War on Land and its annex: Regulations Concerning the Laws and Customs of War on Land.*”. The Hague, Oct. 18th 1907.

<sup>101</sup> Garcia, 2016, 97, 104, 107

<sup>102</sup> *Legality*, 1996, 259

the behavior a civilized people is supposed to keep. Therefore, States are universally expected - customary law it being - to oblige themselves to assess moral and ethical consequences of an attack; and their organs are expected to listen to the humanity they are endowed with in quality of human beings<sup>103</sup>.

### **1.6.5 Cyberspace: Potential Field of Application of the Law of the Commons**

Garcia interestingly observes that, for five different reasons, cyberspace could be rightfully included in the common heritage of humanity areas. The consistency of such a claim will be deeper analyzed shortly. Firstly of all, cyberspace cannot be militarized: States, or their organs, are not allowed to turn certain areas of the web into a surface where it is admissible undertaking whatever military operation. It is evident that discussing military bases would not be working, cyberspace being a virtual reality: however, in the very case that the possibility of their establishment comes up, it has been anticipated by the proscription. Secondly, states should not have the permission to nationalize any area of the cyberspace. As it has been stated for Antarctica, no States should be allowed to acquire sovereignty on cyberspace by establishing a central government. Thirdly, there have to be granted its intergenerational quality, applying the principle included in the concept of sustainable development. Current users, as all the persons currently living on earth provided with the moral duty of keeping the environment safe for the next generations, should ascertain the preservation of the cyberspace, in order to guarantee the availability of its resources in the long run. The fourth consideration consists in the importance of the collective

---

<sup>103</sup> Garcia, 2016, 97, 104, 107

cooperative management. As it has been written above, and it being common heritage, the whole humanity has been entitled to give personal contributions and help to assure an appropriate and accurate supervision. The final and fifth aspect touched is the obligation of effectively permitting all the people exploiting the cyberspace to share its benefits. It is manifestly related to the aforementioned prohibition of nationalization, it prescribing the necessity of an equal and fair use of both the spaces and all the manifold elements it encompasses<sup>104</sup>. Here, it is worth mentioning again the challenge the absence of definitions exactly spelled out poses: although the context of the real world is clear and prescriptions can base on concrete actions and objects, the web avoids such a possibility, making the framework blurry and the implementation complex.

---

<sup>104</sup> Garcia, 2016, 108

## 1.7 Conclusions

Now that the picture about the universal legal framework of new technologies has been studied, it is time to draw the appropriate conclusions, providing with relevant considerations on the matter. The chapter clearly showed that, even though the context itself is precarious and needs both ameliorations and implementations beyond doubt, there do already exist pillars to look at. Also, it displays that awareness about the urgency of taking action, especially within the scholarship, is quite widely spread<sup>105</sup>. The most evident limit the research has found is the nearly total absence of a commonly shared and accepted series of definitions: when there is no clear understanding and systematization of what appear and happens in front of our eyes, it is at least complicated to know how to correctly draft a well-defined, pragmatic, multilevel and coordinated legislation<sup>106</sup>. Unfortunately, the difficulties are posed by the same nature of the element taken into account: it is simply explained by considering cyberspace as case study. As it will be further analyzed next, one of the features of the cyberspace is its total absence of boundaries, both theoretically and pragmatically talking. The consequences are the incapacity of setting a precise limit where to allow or not determined activities, and the impossibility of defining whether a certain area is only addressed to civil or military activities. Also, the activities themselves cannot be sharply distinguished: therefore, there is no clear perception of cyberattacks if carried out. As a result, setting precisely peacetime and wartime is quite complex, and the potential application of International Humanitarian Law is under question, because, as it has been written previously, the only available condition to begin applying this legal body

---

<sup>105</sup> Garcia, 2016, 94, 105, 106, 109

<sup>106</sup> Garcia, 2016, 96, 109; K.P.Apuuli, *The Use of Unmanned Aerial Vehicles (Drones) in United Nations Peacekeeping: the Case of the Democratic Republic of Congo*, in "American Society of International Law", vol.18, Issue 13, June 13<sup>th</sup> 2014.

is the recognition of 'state of war'. Thus, all those who are responsible for the assessment will be bound to analyze the effects case by case, posing considerate and accurate multilevel evaluations without forgetting any of the elements under review<sup>107</sup>. This argument can be further developed - complicating the already complex context - if the instance of the drone is taken into consideration. Its dual nature consents the remote controller the employment as a 'combat drone', so as weapon to launch attacks both wartime and peacetime, or as a peace-carrying tool, to help United Peacekeeping Operations<sup>108</sup>. The lack of transparency that the program brings blurs the context even to a higher degree. By the same token, misinterpretations, both of terminology and action, could easily come up in all the other occasions of employment of the new weaponry: they provoke the worsening of an already delicate situation, it being necessarily under hostilities<sup>109</sup>. Another issue to face, that actually is merely cultural instead of a properly legal one, is the correct behavior of the States: until there is no willingness of behaving as it is provisioned in the already existing instruments, it will be under any condition possible to achieve the theoretically goals set<sup>110</sup>. What is truly advisable for the future, and that most of the scholarship strives to guarantee, is the drafting of comprehensive and international treaty or treaties ruling the whole matter. They recommend taking the existing bodies and the customary law into consideration as a solid base to build a new and innovative architecture, with a careful attention on all the potential variables included. Also, multifaceted efforts in guaranteeing a constructive dialogue including all the appropriate expertizes are essential, in order to build an as complete as possible frame. The necessity of behavioral standards, global norms and systematicity in

---

<sup>107</sup> Garcia, 2016, 95, 102, 105

<sup>108</sup> Apuuli, 2014

<sup>109</sup> Garcia, 2016, 96, 104-106

<sup>110</sup> Garcia, 2016, 94-96, 104, 108, 110

order to end uncertainty is urgent, and cannot be overlooked under any circumstance<sup>111</sup>. The importance of the abovementioned necessities is even more realized when the security governance is taken into account. International security can be reached through weapons regulation, and it is the States that decide their behavior on it: the more cooperation there is, the more security there will be<sup>112</sup>. The last consideration is that, even though with a perfectly drafted document, the real implications and effects of a weapon can only be ascertained after its very employment. Pragmatically, there can always happen some unpredictable technical failures: therefore, a total knowledge is quite impossible without foreseeing abilities<sup>113</sup>.

---

<sup>111</sup> Garcia, 2016, 94-96, 98, 101, 109, 110

<sup>112</sup> Garcia, 2016, 95, 110

<sup>113</sup> Garcia, 2016, 102

## **Chapter 2**

### **Military Technologies: a Structural Description**

#### **2.1 Introduction**

The second chapter, after the analysis of the legal framework, will focus on the description of a series of weapon precisely: such a structure has been planned in order to picture the appropriate framework for the reader. In fact, firstly providing with the legal limitations the jurisprudence set, and that compose the boundaries of the carried out analysis, with the related issues arising; secondly, disclosing relevant information about the objects themselves to which the abovementioned legal structure is addressed. The second chapter gives effectively the appropriate context as far as technology is concerned, and will help flick through the final section, the chapter three, addressed to the philosophical dissertation about the recently developed military technologies. Now that I have given a brief overview of the chapter's content, I may go deeper and explain a sort of its commented outline.

The first paragraph will talk about the drone, one of the best-known military weapons, and without doubt one of those that have been employed most since the 80s at least. An inquiry about technological, economical, political aspects has been carried out; then, a conclusive debate, effectively dividing society, concerning those in favor of the employment of the drone and those against. The second paragraph will discuss cyborgs, namely cybernetic organisms made of an organic part, a life form pragmatically of several natures, and a mechanical one, belonging to the information sector. The inquiry will bring up five

developments of cyborg, examples of potential employments, in particular those the DARPA (i.e. the Defense Advanced Research Projects Agency) focused attention upon, in order to pragmatically show which the fields of application are. The third paragraph will consider biological and chemical weapons, the most massive and dangerous weapons even though they appear smaller in size rather than the aforementioned ones, even invisible in some cases. It will be given a description of the range of potential effects on victims, with a conclusive case study for each one. The fourth paragraph will treat cyberwarfare, in particular cyber espionage as a case study. Since the web is in the foreground today, the choice of an in-depth study of the field was nearly compulsory. However, the description has to be considered a mere introduction to the theme with a limited supply of hints: as it will be underscored later, the advancement of computer science and the ongoing evolutionary process of the subject is so fast that no extremely precise analysis may be provided. Finally, the fifth paragraph, before writing my conclusions about the whole chapter and introducing the following one, will be on the subject of research and development sector as far as the military field is concerned. My point will be studying the amount of resources countries usually address to investments in developing new technology, particularly in the production of weapons, to draw appropriate considerations about the outcome.

## 2.2 The Combat Drone

G.Chamayou affirms that politics, economics, war and military industry influence one another<sup>114</sup>, and it is absolutely evident if attention is paid to what I.Wiesner writes. In fact, she states that politicians are generally more and more apt to employ all those military tools that can be legitimately named ‘post heroic’ weapons, they avoiding the necessary physical presence of even one soldier: the drone perfectly fits this cultural framework, and, as a consequence, its deployment appears to be the most politically and socially acceptable action, especially when it comes to human rights. In 2017, over 70 countries possess drones, and more than 50 have been developing their own ones: without paying attention to the correct or wrong deployment of this kind of weapon, the impact of drones on civil society is undoubted. If the analysis is further carried out, the relation cause-effect linking society and technology appears to be evidently reciprocal, the impact being effectively perceivable: technology influences society as much as society influences technology.

First of all, outlining the formal characteristics of the drone is nearly compulsory. It is necessary to remember that the wider system in which the weapon is effectively inscribed is basically founded on the blend of three different, though often appropriately related, field: aviation, communications and weapons technology. For a complete explanation of the previous statement, as for ‘aviation’ and ‘weapons’, it is easy to grasp that it concerns the fact that drone belongs to the field of aircraft weapon<sup>115</sup>; when ‘communications’ is considered instead, the remote command, therefore the vast physical distances between the

---

<sup>114</sup> G.Chamayou, *Teoria del drone: principi filosofici del diritto di uccidere*, Roma: DeriveApprodi, 2014. Trad. di Marcello Tari. p.189

<sup>115</sup> I.Wiesner, *A Sociology of the Drone*, in “Journal of Military and Strategic Studies”, vol.18, issue 1, 2017. pp.43, 44, 48-52

weapon and its commander, and the satellite links the weapon itself needs to work, are the two aspects implied<sup>116</sup>. We might bitterly affirm that its *modus operandi* merely resembles a super efficient but macabre hide and seek: it is omnipresent and can move around - for an acknowledge long time - the war space covering its every single possible inch, looking for the targeted victims, until its power completely wanes. Furthermore, it usefully archives in its software the information gathered during the aerial inquiry: in so doing, it allows to analyze and interpret social, spatial and temporal data, and finally come out with new and different kinds of information, an updated targeting and a higher ability of anticipating targeted victims actions. As a result, a constant scheme is elaborated, and recognition and surveillance massive activities end up getting more and more precise, increasing the certainty of noticing the behavioral anomalies targeted people could present. On the other hand, its screens, ergo the means through which the weapon can process data at disposal, do not guarantee high definition and perfectly distinguishable figures, whose sharpness might be questionable: therefore, it is easily intuitive that the huge quantity of clues a drone is able to gather does not necessarily corresponds to their high quality.

Passing to the fairly economic aspect, a couple of points are rightfully reported. Taking into consideration the necessary supply for the correct working of the drone, its own bullets can be employed for multiple attacks: the weapon only needs recharging after each hit, and then it is ready for the next round. If we compare its employment to heavier and scarcely moveable weapons, it is a pretty easy task to affirm that the efficacy is a way too high, especially recognizing even the financial burden of a potential consecutive employment of the weapon<sup>117</sup>. Obviously, costs are a matter to deal with, and the use of drones appears

---

<sup>116</sup> C.Cole, *What's Wrong with Drones?*, in "Drone Wars UK.net", Oct. 2015.

<sup>117</sup> Chamayou, 2014, 26, 32, 35, 36, 38, 39, 41, 43, 44-46, 51

to be truly supportive with regard to savings. In a globalized and constantly networking world as it is nowadays, wars are extremely likely to develop and spread extensively across the world geographically talking: nevertheless, long distances and large spaces require undoubted high expenses. The act of downscaling wars through drones deployment is particularly estimated to help cost-benefit calculation and avoid exaggerated high costs. The drone also plays a eminent role when the research activity turns into a diachronic evaluation of the status of the military technology itself: as a matter of fact, it occupies an intermediary position in the evolutionary process towards the conception first and the development then of autonomous weapons. Yet, it is impossible to precisely and correctly anticipate the true and real evolution of the technology in practice, apart from an incomplete series of hypothetical and potential more or less likely directions<sup>118</sup>.

Now that the topic has been tackled both on the pretty technical, concerning its technological aspect, and economic aspects, the inquiry has to turn to the study of the political one. The use of the drone has conventionally been considered an application of the antiterrorist strategy in the short-term, for quick and ready solutions: in fact, operating through targeted prays, it points at the total and permanent elimination of the individual without any other option deserving time to concentrate on. The underlying relation between the drone and the victim physically resembles the police-criminal dualism, and, as a result, the intrinsic opposition good-evil: such a kind of extremist and unidirectional relation avoids every possible opportunity of mediation between the factions. Also, it is crucial to shed light on how a precise hierarchically ordered levels fight comes up. Not only is the total annihilation of the enemy the aim of the attack, but more specifically, doing it at a distance, underscoring that the two factions cannot lie on the

---

<sup>118</sup> Wiesner, 2017, 50, 58

same at all: this is the concrete application of the traditional asymmetrical war. Insisting on the current analysis, it is relevant to highlight another aspect: it appears remarkably evident that the self-preservation instinct, naturally intrinsic to the human nature, shows up explicitly. Accordingly to the great effort to reduce the number of victims in conflicts – though attention is usually mistakenly only focused on the sacrifice of soldiers belonging to the country from which the drone is launched - the traditional principles of heroism and self-sacrifice, that have dominated the scene of the warfare over the years, are definitely overcome, and it is hard to find notable signs of a potential return. Not only does the research and development sector in the field of technology boost progress, advancement and innovation: but they also directly entail the fact that the weapon takes distance from the person in charge of carrying or employing it, the physical contact is completely lost. Thus, the unavoidably founding pilasters of the dualism or the close relation that used to be the binding link between the two basic elements composing the original core of the duel, the fight ‘face to face’, got completely emptied<sup>119</sup>.

Without doubt, the United States of America can only be taken into account as the most suitable and appropriate example to concretely study the topic. Basically, they are the country investing most in the military, and having the most numerous fleet of drones across the world: they effectively rely upon them very much and in several military activities<sup>120</sup>. Achieving an as much as complete automation and robotization of warfare through the constant and progressive evolution of technology, especially as far as the military is concerned, has been a top priority to

---

<sup>119</sup> Chamayou, 2014, 60, 61, 81-83, 88, 89, 95

<sup>120</sup> G.B.Gobeil, *New Technology, Same Old Strategy: Why Artificial Superintelligence Represents the Social Continuation of the US Quest for War Virtuosity*, in “Journal of Military and Strategic Studies”, vol.16, issue 2, 2015. p.100

the American government recently: always bearing in mind the Vietnam War, which literally shocked the whole American culture leaving an unforgettable mark, the head of the state undoubtedly has a high consideration of the safety of its citizens. Over the years, the quantity of drones that the American government deployed has increased as much as the activities requiring their employment. Until now, drones have been employed for instance in Afghanistan, Pakistan, Yemen, Somalia, them being the countries where counterterrorist activities have been carried out. The current social and institutional *milieu* of the United States perfectly fits the argument igniting the motion about the rightfulness or not of the combat drone, politics and military being two very much debated issues across the layers of the national population<sup>121</sup>. For a complete and exhaustive analysis of the American case, two are the idea related to the issue of the combat drone that needs taking into account: counterterrorism and virtuous war. Starting from the idea that they are effectively intertwined, not only do they influence themselves each other, but they are directly proportional as well. Counterterrorism is the strategy that the government set off right after the 9/11, when a terrorist attack hit the twin towers of the World Trade Center frightening New York City and the whole world as a logic consequence. The virtuous war is perfectly inscribed in this political framework, because it is founded on the idea that the more technology progresses, the more weaponry is efficient, and, as a result, clean hit and focused violence can be more easily achieved: therefore, the impact on the surrounding environment, which is not directly concerned in the conflict itself, can be reduced so far. The goal they set and are constantly trying to reach is an as much as high level of strikes precision so that a weapon can only hit the targeted victim, reducing nearly to zero the potential collateral damage. In so doing, it is nearly crucial the automation and robotization of weapons,

---

<sup>121</sup> Chamayou, 2014, 15, 131, 201

not only in order to avoid casualties, but also victims among the military forces. President Barack Obama, when publicly spoke about drones strikes, underscored the fact that they can save life of "innocent" people: the adjective might be interpreted as a specific rhetorical device to point out how much lives of civilians matter, they being completely out of the conflict. By taking care of his fellow citizens, they belonging to the military forces or not, the fact that the drone effectively keeps safe pilots is highlighted too, since they command the weapon from distance. The United States of America openly supports this approach to war, proudly underscoring the concrete benefits it is supposed to provide. However, its meaningful drawback, or better dark side, this attitude conceals is that diplomacy is gradually set aside too easily, and most importantly the value of compromise is underestimated. According to Barack Obama's words, that time the President of the United States of America, evidently clarifying one of the as most concerning as basic issues related to the employment of the combat drone explicitly states, the drone is supposed to capture victims theoretically, however, it cannot always do it pragmatically, and ends up killing them<sup>122</sup>.

Drawing my conclusions, I definitely believe that at least the mention, depicting a brief but direct picture, of the colorful debate between the parties in favor and against the employment and deployment of drones is truly relevant for a complete and exhaustive analysis. It is even more important because it is still open and has strong argumentations from both of the parties. Considering the literature in favor of the use of the drone, supporters stand up for the positive enhancement of military technology. They promote the improvement of the structures and the fix of all defects compromising the as much as possible perfect working, looking up the progressive automation of the

---

<sup>122</sup> Gobeil, 2015, 96-99, 101, 102, 107, 109, 110

mechanism<sup>123</sup>. In fact, they frankly trust the sure improvement of the performance and progress both in the military, including weapons and the whole system itself as well, and in the artificial intelligence sectors, facilitating, as a result, the command of the drone. In particular, updates in the fields of information and communication are concerned, they being at the very core of the functioning and operative structure of the weapon<sup>124</sup>. If we turn attention towards the personnel engrossed in such operations instead, there can be affirmed that commanders of the drone are trained soldiers who have been given an appropriate preparation to accomplish their mission. Also, behind their work there is a proper and ordered structure taking care of the correct and smooth loosening of the strikes<sup>125</sup>. Conversely, those against argue that politics and diplomacy still play a meaningful role that nobody should not actually underestimate: even though the technological progress the drone mirrors is undeniable, when the tactical or strategic level is taken into account, any improvement is not completely guaranteed at all<sup>126</sup>. G.Chamayou underscores how focusing on technology precisely makes no sense, because people are seemingly setting aside politics and governmental projects: they represents the most effective means able to bring drastic but concrete changes to subvert a dramatic and apparently unsolvable issue. Therefore, he claims the wrong approach to deal with the problem raised: in order to find a true way out and overcome the social division, the focus of the research shall be politics, strategies the state drafts and carries out, an abstract, cultural, social change instead of a merely material one<sup>127</sup>. Moreover, the aforementioned characteristics of the drone are very likely to spur hostility, feelings of displeasure or even

---

<sup>123</sup> Chamayou, 2014, 57, 201

<sup>124</sup> Wiesner, 2017, 42

<sup>125</sup> Cole, 2015

<sup>126</sup> Wiesner, 2017, 42

<sup>127</sup> Chamayou, 2014, 48, 58

anger effectively. Therefore, the consequences that might be pictured for a potential future context are not bright at all, quite the opposite<sup>128</sup>: in fact, as Kurt Volker (the former US Permanent Representative to NATO) said, and he is only one of the voices arising from the experts milieu, such a behavior is likely to lead eventually to radicalization from the ‘enemy’, if it is appropriate to name in this way the people who has been hit by the stroke of the drone<sup>129</sup>. The words of Robert Grenier (head of the CIA’s counter-terrorism centre from 2004 to 2006; previously CIA station chief in Pakistan) further, and surely more concretely, explain the pragmatic outcomes we should imagine: he argues that the number of “enemies” – and here I employ this term properly – is undoubtedly supposed to end up higher<sup>130</sup>. As a result, we cannot wonder if there have also been anti-drone movements openly protesting against the investments of the state resources in the research and development of such a kind of weapon<sup>131</sup>.

---

<sup>128</sup> Cole, 2015

<sup>129</sup> K.Volker, *What the U.S. Risks by Relying on Drones*, in “The Washington Post”, Oct. 26<sup>th</sup> 2012.

<sup>130</sup> P.Harris, *Drone Attacks Create Terrorist Safe Havens, Warns Former CIA Official*, in “The Guardian”, May 6<sup>th</sup> 2012.

<sup>131</sup> Chamayou, 2014, 15

## 2.3 Cyborgs

### 2.3.1 The Structure of Cyborgs

The most appropriate preamble to deal with the topic is stating the difference between cyborg and robot, because, due to science fiction and movies, the two categories could be believed synonyms when they actually are not effectively. The fundamental principle distinguishing cyborgs and robots, even though it is going to be better explained shortly, is that the robot is a machine that needs educating through a wide range of diverse approaches, while the cyborg is an half organic and half mechanical hybrid, therefore, it is basically a composition of elements belonging to different but related realities. The cyborg's artificial part, whose kind, extent and materials possibly vary depending on the definite purposes, is crucial to guarantee the enhancement of abilities, the avoidance of human imperfections or potential errors (when it comes specifically to human cyborgs), and support the architecture on which the very concept is based: however, even the continuity between the original monolithic status and the final hybrid is not supposed to be underestimated <sup>132</sup>. It is quite the opposite actually, since the communication, the interface between the organic, human or animal being, and the technology, electronics, or the digital world, matters a great deal<sup>133</sup>. Now that the basic knot of the topic has been loosened, let's go ahead with the subject this paragraph will address: the cyborg.

Those who used the very word 'cyborg', consisting in the blend of the words 'cybernetic' and 'organism', for the first time, were Manfred

---

<sup>132</sup> D.Mertz, *Cyborgs*, in "International Encyclopedia of Communications", John Wiley & Sons, Ltd. All, 2008.

<sup>133</sup> R.Browne, *U.S. Military Spending Millions to Make Cyborgs a Reality*, in "CNNPolitics", March 7th 2016.

Clynes and Nathan Kline in 1960: in fact, initially the definition of cyborg only focused on the aspect of its being an hybrid composed of human and machine endowed with capabilities beyond human limits. As a result, here is evident how two completely opposite elements have been joined to create a third but distinct mixed element, and the difference between human, subjected to emotions and instability, and machine, constant and rational, is crucially underscored. For this reason, we are witnessing a process that Law and Moser names “ontological softening”. Their argument bases on the notion that new and undefined realities, coming from the mix of more traditional ones, have been taking place: distinctions and limits are turning more and more blurred as the research and development constantly progress. This is the reason why the concept of cyborg may be perfectly inscribed in the more general framework of the post-modernity, where the human element passes from an intrinsically unavoidable element, who the modern system cannot do without, to an updated world where it is nearly totally replaced by hybrids.

At the very core of the studies on cybernetics is clear the fact that a top priority has been assigned to information: this idea dates back to the fifties and those highly competitive times of the Cold War, when technological progress was a foreground element to strengthen the national defense system. United States of America military and NASA were the institutions with the highest interest in developing such a sector: they were truly very committed to sum the mere material and living organisms as far as the military and weaponry was concerned. Considering the human cyborg, not only is improving their abilities the goal to reach, but also providing with updated ones, in order to get to a more efficient performance in warfare<sup>134</sup>.

---

<sup>134</sup>J.Law and I.Moser, *Cyborg*, in “International Encyclopedia of the Social & Behavioral Sciences”, Elsevier Science Ltd., 2001, 3202-3204.

### 2.3.2 Case Studies: What Cyborgs Mean Pragmatically

I decided focus on cases study extensively because I honestly believe it is the most appropriate method to explain and pragmatically show what it is and what it encompasses effectively. The five case studies I am going to review are linked to the DARPA (Defense Advanced Research Projects Agency), the American agency, a branch of the Pentagon precisely, devoted to R&D sector of the military and national security<sup>135</sup>. The first four examples will essentially deal with microsystems that can be implanted into animals with the final aim of detecting, studying and consequently taking advantage of abilities that human beings are not endowed with: the purpose is implementing the defense system through a cost-efficient study of robotic capabilities<sup>136</sup>. Even though over the war history animals have always been a means to study enemies' behavior (I only mention pigeons provided with cameras for example), now the approach is fairly different: once it could be noticed that men used to take advantage of animals' own skills; conversely, nowadays not only are their instinctive abilities employed, but basically also enhanced with the help of technology, by turning them, as a result, into cyborgs<sup>137</sup>. As for insects, the general framework in which the cases can be inscribed is the HI-MEMS (Hybrid Insects-Micro-Electro-Mechanical-Systems) Program<sup>138</sup>: scientists have planned to implant those technologies at the pupal stage, so that the body of the insects, while growing up, could perfectly fit them, and later it will be given the chance to add some more others using the microsystems as

---

<sup>135</sup> Browne, 2016

<sup>136</sup> *Hybrid Insect MEMS (HI-MEMS)*, in "DARPA".

<sup>137</sup> R.J.Rosen, *Science Non-Fiction: Rise of the Cyborg Snails*, in "The Atlantic Monthly", Mar. 13<sup>th</sup> 2012.

<sup>138</sup> *Hybrid Insect; Military Seeks to Develop 'Insects Cyborg'*, in "The Washington Times", March 13<sup>th</sup> 2016.

platforms and keep on with the study<sup>139</sup>. The control of insects' abilities is carried out through a series of different approaches, among which we can find electrical muscle excitation or electrical stimulation of neurons<sup>140</sup>. DARPA worked on sharks too: in fact, there have been developed neuronal implants (“multi-channel neuronal ensemble readers and stimulators, diverse controllers and sensors”) to analyze and understand how to control sharks' brain signals and patterns. The idea lying behind this inquiry is to acquire knowledge of senses and capabilities humans do not possess, and provide the military defense system with them: for instance, educating sharks to trace enemy vessels or detect underwater weaponry<sup>141</sup>. Finally, snails also caught scientists' attention. The project behind the creation of this spy cyborg snails ideally means to put implants, consisting in biofuel cells, into the snail's blood in order to obtain, and later analyze, information about environment and military<sup>142</sup>. The idea of developing such a piece of research comes from the fact that the mere trainings of animals is not sufficient at all, because their instincts risk misleading the study itself and data gathered later on<sup>143</sup>. Therefore, institutions and research centers are more and more devoted to fundraising, especially from the United States of America Department of defense, since these very programs aim to strengthen national security, and furthering their inquiries<sup>144</sup>.

The last, but not least, case study concerns the human beings themselves, precisely how soldier's body can be enhanced through engineering and robotics in order to overcome organic limitations and achieve a higher level of efficiency in warfare. In fact, in 2013 DARPA and U.S. Special Operations Command launched the TALOS (Tactical

---

<sup>139</sup> *Military Seeks*, 2016

<sup>140</sup> *Hybrid Insect*

<sup>141</sup> B.Christensen, *Military Plans Cyborg Sharks*, in “Live Science”, March 7<sup>th</sup> 2006.

<sup>142</sup> Rosen, 2012

<sup>143</sup> *Military Seeks*, 2016

<sup>144</sup> Rosen, 2012

Assault Light Operator Suit), a project consisting in a total body wearable robotics turning the simple soldier in a super soldier. It provides with “ballistic protection; integrated heating and cooling system; [...] sensor, antennas, and computers; 3D audio [...]; optics for vision in various light conditions; life-saving oxygen and hemorrhage controls”. Basically, it is an exoskeleton aiming to, as the President Barack Obama said in 2014, create the “Iron Man”<sup>145</sup>.

---

<sup>145</sup> A.Jacobsen, *Engineering Humans for War*, in “The Atlantic Monthly”, Sep. 23<sup>rd</sup> 2015.

## **2.4 Biological and Chemical Weapons**

### **2.4.1 Biological and Chemical Weapons: General Characters**

Biological and chemical weapons might appear a little off topic, since they do not exclusively belong to the very field of military technologies, surely as much as the former paragraphs are possibly to be believed so. However, over the 20<sup>th</sup> century they have undoubtedly caught a good deal of attention, either for their extremely dangerousness and massive power of destruction or the great strides the research made. Moreover, even though they have been outlawed by a series of agreements since the 20s, there have been programs addressed to the development of such weapons: therefore, it is, in my modest opinion, the appropriate case to take them into account and provide a complete framework.

In the report of a WHO Group of Consultants dating back to 1969, biological and chemical agents are distinguished in lethal, incapacitating and harassing agents: however, it is essential to underscore that a precise difference between lethal and incapacitating agents cannot be easily defined, because all depend on doses and circumstances of each case. The first type encompasses those agents employed to provoke death or at least permanent disabilities if their dose is low; the second type concerns agents aiming at producing temporary altered states, they being mental or physical, for long time after the exposure; the third type includes agents responsible for disabilities showing up immediately, but only lasting for a little after the exposure. If the focus is turned to the long-term effects that a weaponry of a such could provoke, there come problems of assessment, because only hypothesis about potential consequences or collateral damage/effects are supposed to be raised,

because every agent has its own features and the interaction with the characteristics of the same environment are consequently further complicated. Also, the report focuses on the potential psychological effects that biological or chemical weapons might produce concerning their development, stockpiling or employment. It shall be shed light on the difference between possible consequences due to the only threat or the true use of weapons. As far as the threat is concerned, anxiety and fear shall be taken into consideration. The psychological status derives from the difficulties in detecting evidence of the agent's presence through senses: therefore, it deals with the incapacity of perceiving its potential effects. This kind of stress provoked by feelings of uncertainty and danger is at the very base of changes in the behavior of the entire society, and it is certainly highly probable that people get inclined to irrational attitudes or reactions. On the other hand, concerning the real employment of weapons, there are enlisted panic, fear of those affected, and changes in social organization. The report points out the fact that, due to panic, people could walk away from their place, and, as a result, create additional problems to tackle beyond the single potential effect of the disseminated agent itself; those already affected, albeit it is not assured that they are effectively able to be contagious, might be believed to be so, and spread the disease they provoke; finally, when it comes to social organization, concerns are addressed to the possible changes that shall be applied to specific infrastructures in order to properly manage the new existing society, it being the updated social structure and environment, in all its features, after the breaking out of the disease<sup>146</sup>.

---

<sup>146</sup> *Health Aspects of Chemical and Biological Weapons*, Report of a WHO Group of Consultants World Health Organization, Geneva, 1970. pp.12, 14, 121, 122, 123, 126

## 2.4.2 Biological Weapons

Biological weapons consist in a systems of any kind of organisms or toxins, modified or not, employed to harm, at least, but even to cause death<sup>147</sup>. The Report of the Group Consultants, already mentioned above, reported four different potential kinds of infections: viral infection; rickettsial infection; bacterial infection; fungal infection<sup>148</sup>. Two are the components they require: the “deliver machine”, whose form may be for instance a rocket, a missile, or a bomb; and the “weaponized agent”. The literature shares the idea that the multilateral approach is without doubt the most appropriate approach to cope with this very kind of weapon, since distinguishing the true reasons behind the act is a complicated procedure. Multilevel, diversified and coordinated efforts across sectors, in order to manage the diversified nature of biological weapons both to reduce the risks of potential attacks and to find the most suitable solutions when an attack has taken place, is for this reason unavoidable<sup>149</sup>. The Biological Weapons Convention (BWC) entered into force on March 26<sup>th</sup> 1975<sup>150</sup>.

## 2.4.3 Chemical Weapons

The structure of every chemical weapon is composed of the commercial chemicals and munitions<sup>151</sup>. The report of the WHO splits chemicals in four groups: lethal, incapacitating, harassing (senses irritating) and anti-plant (aimed at the food supply and environment)

---

<sup>147</sup> United Nations Office of Geneva, *What are Biological and Toxin Weapons?*.

<sup>148</sup> *Health Aspects*, 1970, 61, 70, 73, 78

<sup>149</sup> *What are Biological*

<sup>150</sup> *Biological Weapons*, UNODA (United Nations Office for Disarmament Affairs), Dec. 14 2017.

<sup>151</sup> *Chemical Weapons*, UNODA (United Nations Office for Disarmament Affairs), Dec. 14 2017.

agents. Later, it enlists subcategories as for the first two groups: therefore, considering the lethal agents, there are lung irritants, blood gases, vesicants (or blister agents), nerve gases, toxins/proteins of high molecular weight and aryl carbamates; as for the incapacitating agents, there are bacterial enterotoxins and related substances, and psychochemicals instead<sup>152</sup>. The most flourishing time for chemical weapons in the 20<sup>th</sup> century was the Cold War: however, it only entailed the stockpiling and development, because in the sources there is no mention of employment. The Chemical Weapons Convention (CWC) entered into force on April 29<sup>th</sup> 1997<sup>153</sup>.

#### **2.4.4 Case Studies: The Vietnam War and Japanese Experiments in Manchuria**

The cases I will analyze are the following ones: The Vietnam War for the chemical weapons, and biological warfare programs for biological weapons. Although recently there have been many episodes of use of chemical weapons, it has been harder to find appropriate and known examples of biological ones in modern warfare<sup>154</sup>: therefore, I will present the test of bioweapons Japanese military did in Manchuria in the years 1936-45, though in this very case they were not employed specifically as a military weapon.

In the period of the Vietnam War, precisely between 1961 and 1971, the US military sprayed from its aircrafts circa 12 million gallons of Agent Orange over the territories of the Republic of Vietnam and the Democratic Republic of Vietnam. This project, named “Operation Ranch Hand”, one of the operations composing the Operation Trail Dust, the US

---

<sup>152</sup> *Health Aspects*, 1970, 27, 29, 31, 35, 41, 44, 46, 51, 55

<sup>153</sup> *Chemical Weapons*, 2017

<sup>154</sup> *Health Aspects*, 1970, 60

military herbicide program, was the most extensively carried out: in fact, the Agent Orange was the chemical herbicide the US Air Force employed the most as a weapon during the war. The very goal of such a military strategy was to prevent enemies from hiding in the landscape, forest and mangroves, and, as a result, escape from American soldiers. Although the real amount of the agent cannot be precisely estimated, there have been such a massive use that the Vietnamese government set on August 10<sup>th</sup> the “Agent Orange Day” in order to remember all the victims who suffered from the collateral effects of the herbicide: in fact, on August 10<sup>th</sup>, 1961, took place the first throw by the US Air Force. Unfortunately, it is not precisely known yet both the amount of the agent sprayed and its location as well. Also, unclarity remains when considering the long-term effects both on the environment and people of the action<sup>155</sup>.

In the period 1936-45, in the context of the Second World War, the Japanese military, intentionally violating the Geneva Protocol dating 1925, carried out a series of experiments in field laboratories, located in the puppet state of Manchukuo, for the purpose of developing biological weapons. The unit in charge of it, whose strikes would be later addressed to Chinese cities, was the Unit 731, a secret unit of the Kwantung Army officially known as the Epidemic Prevention and Water Supply Department and the first secret unit of the Epidemic Prevention Research Laboratory, set up in 1932 at the Army Military Medical School of Tokyo. The unit’s leader was Ishii Shiro, the Lieutenant General who also gave the name to the Ishii Network, the whole Japanese organization of the Imperial Army devoted to the development of biological weapons.

---

<sup>155</sup> M.F.Martin, *Vietnamese Victims of Agent Orange and US-Vietnam Relations*, Congressional Research Service, Report to United States Congress, May 28<sup>th</sup> 2009. p.14-16, 29

Experimentations were carried out on humans since they were precisely the targets the project looked at originally<sup>156</sup>.

---

<sup>156</sup> K.Tsuneishi, *Unit 731 and the Japanese Imperial Army's Biological Warfare Program*, in “The Asia-Pacific Journal | Japan Focus”, translated by John Junkerman, vol.3, Issue 11, Nov. 24<sup>th</sup> 2005. p.2, 5, 8

## **2.5 Cyberwarfare**

### **2.5.1 Cyberwarfare: a Depiction**

Today, talking about web, Internet or social media, just to mention some terms, is becoming quite normal, as the phenomenon of the information revolution is commonly and extensively accepted. Even though the nouns I enlisted above - chosen without a precise purpose - are very likely to make people think about a positive role of the web, its negative aspect should not be overlooked as well. To be clear about what I mean with 'negative', it is necessary to precise its meaning by adding that sometimes people might employ it with evil purposes to damage the community on the whole, therefore with clear implications to economy, society and industry. This is exactly the case of 'cyberwarfare', a term belonging to the military domain especially, very recently within the common lexicon: however, it spread across the entire world quickly and broadly beyond the shadow of a doubt. It caught the attention of both scholars and media precisely when information technology became a pressing issue in the military domain, and States, as a consequence, have started addressing a great deal of their own resources in order to take advantage on their competitors – namely other powers. Parks and Duggan report the following definition of cyberwarfare: “a combination of computer network attack and defense and special technical operations”. If we focus our attention on the terms appearing in the definition, it is evident that its features are linked to the internet, to the web, to the abstract networks that can be built through a screen and within the virtual reality; the duality of attack-defense is a requirement as well, it being at the very core, unavoidable somehow, of the conventional image of the war itself. However, in order to truly

understand it, the concept of cyberspace, “an operational domain whose distinctive and unique character is framed by the use of electronics and the electromagnetic spectrum to create, store, modify, exchange and exploit information via interconnected information communication technology (ICT) based systems and their associated infrastructures”, is crucial here to define<sup>157</sup>. Since, for our analysis, we are interested in the application to the military field, it is useful to define also the term cyberattack, that is “an individual attack intended to cause damage, destruction, or casualties”.

Thus, now that the appropriate framework through definitions of the basic element composing the concept of cyberwarfare has been depicted, it is time to devote the inquiry to the description of its features. Beginning with the words of Lewis, he underscores how the main characteristics of a cyberattack are supposed to be quickness and unexpectedness: in so doing, the body responsible for the attack can obtain a concrete advantage on victims. The aforementioned features are effectively related to the fact that computer science’s nature is intrinsically linked to speed, concretely evident when attention is paid to the evolutionary rhythm of the unpredictable and highly dynamic advancement<sup>158</sup>. Also, hardly to be distinguished is the one/those who have been appointed to commit the attack. The uncertainty in the matter derives from the fact that either a single person or a group can be appointed to it: the instigator, be private, involved in a company, public, a government or a public body, or whoever else, has the chance to make the most appropriate choice about the selection of the hired hacker<sup>159</sup> to

---

<sup>157</sup> R.C.Parks and D.P.Duggan, *Principles Of Cyberwarfare*, Copublished by the IEEE Computer and Reliability Societies, Sep./Oct. 2011. p.30

<sup>158</sup> J.A.Lewis, *Cyberwar Thresholds and Effects*, Center for Strategic and International Studies Copublished by the IEEE Computer and Reliability Societies, Sep./Oct. 2011. pp.23, 25, 27

<sup>159</sup> In the Oxford English Dictionary, “a person who uses computers to gain unauthorized access to data.” <<https://en.oxforddictionaries.com/definition/>>

accomplish goals previously set<sup>160</sup>. When attention turns to the spatial context, the total absence of physical limitation appears unmistakable<sup>161</sup>: there are no potential limits to the extension of the warfare ground, since it can be literally countless<sup>162</sup>. Internet connection is spread globally, with currently very few areas where somebody cannot be connected at all, that however are likely to gain wide margins of improvement in the next years, therefore provided with working connection. The efficacy behind the dissemination of specific hence messages is dramatically high, since they can reach billions of people in different places at the same time or anyway with a gap of only seconds or minute of difference<sup>163</sup>. The explanation Lewis provides to clarify the point bases on the fact that it origins from human minds: it is a human creation effectively and results from a continuous and constant process for that reason<sup>164</sup>. Moreover, it is crucial to bear in mind that every element of the cyberspace is basically a human creation, because they require to be created at a certain point: there is always a human being behind a new or updated component, so it is undoubtedly a human manufactured reality. And it is that creator, that demiurge, who appoints somebody or something else to execute a precise function/role. Consequently, it is logically assumed that in the cyberspace there can always be changes and adjustments on its condition of operation and intrinsic structure: as Parks and Duggan legitimately state, the only principles that cannot be for any reason modified are the those governed by physics. Ductility prevents form guaranteeing 100% rate of reliability, because no preordered and unchangeable plan can

---

<sup>160</sup> A.Teti, *Cyber intelligence e cyber espionage. Come cambiano i servizi di intelligence nell'era del cyber spazio*, in "Gnosis, Rivista Italiana di Intelligence", Mar. 2013. pp.103, 105, 118

<sup>161</sup> Parks and Duggan, 2011, 32

<sup>162</sup> Lewis, 2011, 24

<sup>163</sup> Teti, 2013, 95-97, 103, 105

<sup>164</sup> Lewis, 2011, 24

exist<sup>165</sup>. At the very origin of this process there is the normal information technology progress, which is constantly and inevitably set off when a state acknowledges its late, and therefore the need for updating and catching up as soon as possible, in order to fill the existing gap<sup>166</sup>.

Although cyberwar can theoretically take place in an infinite space, pragmatically, the combatants, to be as such, shall employ the same tools. They only know a part of the total possible cyberspace, and it corresponds to the 10 % more or less, as Parks and Duggan write: the conflict with good reason can be defined circumscribed in a precise location within the immensely vast digital world. This very condition ends up being a drawback for people involved, because actions can be highly predictable by the faction with a deeper knowledge of the laws ruling the war zone<sup>167</sup>. Albeit there may be a high probability of truly understanding enemies' intentions, the effects cannot be taken for granted and ascertained under any circumstances<sup>168</sup>. As far as the 90% portion left is concerned, it is totally unknown: therefore, combatants are completely vulnerable, since they do not properly know its functioning concretely. Another consequence of the characteristic above is that every change is visible and as a result traceable. The very bases of the cyberspace being codes, it is always possible to find and discover when and where a precise adjustment took place. This issue is indisputably related to the aforementioned argumentation of the human creation: considering this nature, although it is complicated to track exactly the path, signs cannot be totally erased under any condition<sup>169</sup>.

Touching on the effects cyberwarfare could produce on society, it is necessary to underscore that no direct destruction is plausible, but only

---

<sup>165</sup> Parks and Duggan, 2011, 33

<sup>166</sup> Lewis, 2011, 26, 27

<sup>167</sup> Parks and Duggan, 2011, 34

<sup>168</sup> Lewis, 2011, 24

<sup>169</sup> Parks and Duggan, 2011, 32, 34

an indirectly provoked danger: it is possible that it takes the shape of emotional strikes. It may produce uncertainty, hit confidence, so make infrastructures instable<sup>170</sup>, influence decision-makers and mislead<sup>171</sup>. In particular, the Web Ecology Project<sup>172</sup> provides with an example of one single person's or a defined group's ability to influence and persuade to make precise choices and as a result control an entire community sharing the same preferences and profiting of emotional bounds and feelings. This kind of operations, named *tunnelling*, is fulfilled through the exploitation of users' profile, their acquaintances, features and correlations: therefore, links and relations act as a springboard for successful espionage operations. Moreover, through online friendships, privacy settings might be effortlessly overcome, accessing intimate information and data directly.

The path to ensure an efficient protection is still long and there are no chances of taking the one most traveled by, because nowadays the cyber-history is being written day by day constantly. Therefore, experts are supposed to strive to come up with appropriate discoveries/innovations lightening the burden to carry. Teti provides with a smart hint for a potential and perfectly affordable solution: in fact, he states how one of the issues to tackle is the lack of collaboration between governments and companies. In order to ensure an appropriate and effective both defense and communication system, cooperation between these bodies is seen as one of the opportunities to fill up the existing gap<sup>173</sup>.

---

<sup>170</sup> Lewis, 2011, 24, 25

<sup>171</sup> Parks and Duggan, 2011, 32

<sup>172</sup> It is a project aiming to verify social engineering: thus, it conducted research and studies on the Arab Spring to test the ability of widely influencing a community through social networks.

<sup>173</sup> Teti, 2013, 100-1, 103-5

## 2.5.2 Cyber Espionage

Currently, the quantity of spyware<sup>174</sup> malware<sup>175</sup> estimated across the web is said to increase: not only is this a manifest mark suggesting the widespread of the espionage activities, but also, and most importantly, that cyber espionage is the main operation that intelligence exercises<sup>176</sup>. Thus, rightfully, cyber espionage can be placed here as instance of cyberweapon. However, before writing about the topic, I feel undoubtedly essential to make a couple of considerations providing the reader with the correct interpretation of the paragraph. Firstly, since giving a complete and exhaustive picture of the cyberweaponry would require an entire thesis by itself, and there is not enough space to deal with it extensively, I will only focus here on cyber espionage as exemplary, even though its status of ‘weapon’ is currently debated;<sup>177</sup> secondly, the abovementioned complete and exhaustive picture might be almost impossible without setting a time limit, that is the moment of my writing, because day by day new cyberweapons might come up. This is the very reason why scholars and experts generally are very concerned about the unpredictability of cyberweaponry’s constant evolution, with the progressive extension of the areas covered with connectivity and the increase in complexity of the systems involved, one of the most impending obstacle to overcome: this unexpectedness hardens a multilevel collection of data and the consequent comprehensive analysis – with accurate evaluations - that could be normally conducted approaching other fields. A clear and defined depiction might allow

---

<sup>174</sup> In the Oxford English Dictionary, “Software that enables a user to obtain covert information about another's computer activities by transmitting data covertly from their hard drive.”

<sup>175</sup> In the Oxford English Dictionary, “Software that is specifically designed to disrupt, damage, or gain unauthorized access to a computer system.”

<sup>176</sup> Teti, 2013, 111

<sup>177</sup> P.J.Parks, *Cyberwarfare (Compact Research: the Internet)*, Referencepoint PR Inc, 2012. p.11

deeper interpretations of potential damage, avoiding incorrect miscalculations, especially considering that estimating nearly uncountable damage is quite unaffordable when it comes to intellectual property. Thus, it is crucial to invest a huger amount of resources in the qualitative increase of the control system and avoid high losses: here the point is that the lower the defensive systems are, the higher the financial damage might be – and, beyond doubt, further implementations in the protection system are cheaper than potential losses to the economy of the country, and consequently its community<sup>178</sup>.

According to what is found out in Parks's text, the definition of cyber espionage is "unauthorized entry into a computer system for the purpose of copying sensitive information"<sup>179</sup>. It is easily intuitive assuming that the major purpose of the espionage is gaining classified data through the web, as the traditional 'physical' espionage bases on the acquisition of information personally. Continuing this comparison, the identification of both the instigator and the spy is even harder, due to the fact that only codes are concretely available – and this is an advantage they care definitely a lot about. Identity is a matter standing out particularly for a cyberspies because all their activities base upon users and identities; it is effectively the engine for accomplishments. In fact, *bot masters* are permitted to create as many profiles as they want, and usually employ them all at the same time to be more incisive. Once the spy succeeds in entering the preferred network, it will be allowed to reach all the linked technological devices they like, exploiting their correlation and their exchanging secret dossiers. The moment of the attack is not bound to be the only chance for a spy to undertake operations that is in charge of: in fact, the attack might be limited in time with a single or a repeated multiple hit, or it might last for an undefined period, over which

---

<sup>178</sup> Teti, 2013, 94-7, 108, 111, 118

<sup>179</sup> Parks, 2012, 11

the spy is able to gain information and data. Although I have previously written that cybercrime are committed in some and defined portion of the cyberspace, there is a specific area on the web, named *darknet*<sup>180</sup>, where spies or crackers lie and undertake - even though the term “plot” might be more appropriate in this context - all their activities in shadows, without the risk of being easily revealed and identified by security services and agencies. It is meaningful to underscore that across the whole darknet trust among criminals is total and reciprocal: they could, to a certain extent unnoticed, exchange records obtained, data gathered, recruit new initiates, raise funds and even give help or advises to implement and better the structure of their operations, in order to increase their level of secrecy and coverage. They develop a deep unbound hardly severable, because their survival lies in both their ability of consciously keeping the infamous secrets they all share as far as both their identities and manifold operations is concerned. To conclude, I will touch on methods thanks to cyberspies succeed in sneakily seeping in communities and grasping information they have been asked to find out. Here is a list of some recurrent devices: social network poisoning, by stealing the identity of a user; identity pretense, by creating a profile with credible characteristics; the employment of botnets<sup>181</sup>; fake personal or social bot, by creating hypothetically unlimited profiles to be directly in touch with an entire community<sup>182</sup>.

---

<sup>180</sup> In the Oxford English Dictionary, “A computer network with restricted access that is used chiefly for illegal peer-to-peer file sharing.”

<sup>181</sup> In the Oxford English Dictionary, a botnet is “a network of private computers infected with malicious software and controlled as a group without the owners' knowledge.”

<sup>182</sup> Teti, 2013, 99-101, 103-5, 107-8, 111, 115, 118

## 2.6 Investments in Military and Army: a Global Perspective

The decision behind the inclusion of this topic, namely investments in military and army, comes from the very fact that data about resources amount employed to feed this precise area of the economy is apparently very huge. Also, as concluding paragraph of the chapter, it fits in the context of the discussion very well, in order to provide with an exhaustive and complete picture. Even without a deeper and considerate knowledge of what is going on currently in the world of international affairs, but only taking a superficial and limited look at the evolution of contemporary history, it is easily noticeable that the majority of countries on the whole has an inclination to address attention, efforts and money to war, military, army, weapons, and everything else that can be related to them accordingly. Although this could come from a mere perception, data, that will be showed shortly, proves the trend and also develops further extensively. The title of the article by Pace, published on the magazine “Wired”, confirms what I have just stated above: undoubtedly, military expenditure is increasing currently<sup>183</sup>, in such a measure that Mosca employs the term “arms race” considering the peaking of the arms market. Moreover, this journalist adds that taking timing into consideration, the last 25 years have been particularly meaningful<sup>184</sup>. A crucial and unavoidable aspect to consider is the fact that the slowly decreasing over the years 1998-2011 only was a direct consequence of the economic crisis and the geopolitical turn, namely the withdrawal of the majority of the American troops from both Afghanistan and Iraq<sup>185</sup>. Specifically, beginning the inquiry in the 1988, the amount of military expenditure reached 1.595,3 billion \$, in 1998 1.068,5 billion \$ (with an

---

<sup>183</sup> A.Pace, *La spesa per le armi nel mondo è (di nuovo) in aumento*, in “Wired”, 8 Apr. 2018.

<sup>184</sup> G.Mosca, *Il mercato delle armi continua a crescere*, in “Wired”, 22 Feb. 2017.

<sup>185</sup> Pace, 2018

evident contraction), in 2008 1.633,7 billion \$ (growing again), and in 2015 1.759,6 billion \$ (clearing exceeding the previous 25 years tax)<sup>186</sup>. In the context of this analysis, it is particularly important because the turn does not come from a cultural standpoint change, but merely from different and external influences<sup>187</sup>. Russian Federation is exemplary in this case. Vladimir Putin, the actual President of the State, while delivering a speech to the Nation, proudly introduces to the house new nuclear weapons under development<sup>188</sup>: in fact, as Cosimi reports, the State is allocating a great deal of resources in order to provide with a continuous and progressive advancement<sup>189</sup>. The very reason at the origin of this taking action is a personal reply to United States of America's decision to withdraw from the "Antiballistic Missile Treaty" and the following development of ballistic missiles as means for defensive purposes and protecting the Nation. This kind of new weapons acquires a higher value when they are interpreted from a linear evolutionary perspective, because they define a technological progress of military tools. With a piece of information more to finish writing about the Russian case, it is interesting to add that the USSR is implementing the Marine too<sup>190</sup>. Sparing a thought for the different trends spread across the world as far as the arms sales<sup>191</sup> is concerned, a couple of considerations can be made: although abovementioned patterns potentially diverge, certainly a clear rise have been tracked on the whole<sup>192</sup>. Precisely, according to data gathered and published by the

---

<sup>186</sup> Mosca, 2017

<sup>187</sup> Pace, 2018

<sup>188</sup> M.Magistrone, *La Russia di Putin ha delle nuove (spaventose) armi nucleari*, in "Wired", 2 Mar. 2018.

<sup>189</sup> S.Cosimi, *Quante sono le testate nucleari nel mondo*, in "Wired", 8 Gen. 2016.

<sup>190</sup> Magistrone, 2018

<sup>191</sup> SIPRI provides the following definition of arms sales: "sales of military goods and services to military customers, including sales for domestic procurement and sales for export."

<sup>192</sup> *Global Arms Industry: First Rise in Arms Sales since 2010, Says SIPRI*, SIPRI, Dec. 11<sup>th</sup> 2017.; A.Fleurant, A.Kuimova, N.Tian, P.D.Wezeman and S.T.Wezeman,

Stockholm International Peace Research Institute in 2018, the total amount of international transfer of major weapons rises about 10 % if a comparison with five years ago is made: as a result, an effective influence on both international peace and security is definitely undeniable<sup>193</sup>. At the very origin of this increase in arms transfer there may be found out Major National Weapons programs, military operations and regional tensions<sup>194</sup>: may only be mentioned to give a pragmatic example the ongoing warfare across Middle Eastern area or the broken political balance nearby the territories of India, Pakistan and China<sup>195</sup>. If then single countries are taken into consideration, they are split into those who extend import operations through the purchase of weapons from abroad, those who devote resources to the production and consequently will be sellers of tools and instruments, those who increase their investments in the military field and those who prefer to avoid a high engagement instead. In order to provide with a concrete instance, let's have a look at the Italian situation. Italy may be considered one of the countries currently addressing a lower amount of resources in the military sector: therefore, it is focusing less attention to the development through investments. However, if the analysis is conducted from the point of view of the production, Italy appears to play an active role in the supply of weapons<sup>196</sup>. In Europe, while in the Eastern area the investments increase, in the Western one a decrease may be traced – though a future recovering is supposed to take place as a prevention from the operations undertaken or terroristic attacks hit by ISIS: apparently, the peculiar inclination is explained basing on the distance/closeness

---

*The SIPRI Top 100 Arms-Producing and Military Services Companies, 2016*, SIPRI, Dec. 2017.

<sup>193</sup> *Asia and the Middle East Lead Rising Trend in Arms Imports, US Exports Grow Significantly*, SIPRI, March 12<sup>th</sup> 2018.

<sup>194</sup> Fleurant, Kuimova, Tian, Wezeman and Wezeman, 2017

<sup>195</sup> *Asia and the Middle East*, 2018

<sup>196</sup> Mosca, 2017

from Russia (referring to what have been previously written). If attention is focused on Oceania and Asia, tensions in the South Chinese Sea, especially between China and Philippines, Viet Nam and Indonesia, mirrors a huger amount of money addressed to the military field. The Middle Eastern area follows the previous behavior, with an evident growth in Iraq, where between 2006 and 2015 the tax peaked the 536%. Another consideration necessarily to take into account is the nexus between the value/price of Oil and its consequences in the financial possibilities of the countries: in fact, the fluctuation in oil prices, provoking a shortage of resources, concretely influences the availability of the state to spend less. According to the ranking of countries' military expenditure, with updates to April 2016, the United States of America places 1<sup>st</sup><sup>197</sup>. It is exemplary reporting that DARPA in 2012 announced that an appropriate reorganization of technological offices, redistributing the respective competences, was in progress: in particular, new offices would be in charge of emerging technologies. Thus, it is indisputable admitting that a special focus is devoted to the development of military technology systems<sup>198</sup>. In 2014 further information about the project have been disseminated: basically, the new offices shall tackle the issue of national security with a multifaceted as well multilevel approach by joining together subjects as biology, engineering and computer science, since they have been considered the new frontiers of the protection of the Nation, "the future of defense technology". Investments addressed to specific sectors such as neuroscience, sensor design, microsystems, will progress National capabilities in providing security, thanks to the fact that the convergence of such fields is said to conceal a high potential. In particular, pragmatically talking about tools production, I will bring to the attention a couple of example: warfighter abilities and harness

---

<sup>197</sup> Pace, 2018

<sup>198</sup> *DARPA Restructures/Creates New Offices*, in "DARPA", 2012.

biological systems. As far as the former, the set purpose is the keeping the highest level of performance for a long time as much as possible, and, when a decrease is tracked, the quickest way to restore them to the initial level; on the other hand, as for the latter, starting from the viewpoint stating that “biology is nature’s ultimate innovator”, the development of innovative single products or whole systems is the goal to reach, in order to strengthen the National Security<sup>199</sup>. Resuming the position in the aforementioned rankings, China and Saudi Arabia follow the United States of America, then we will find respectively Russian Federation, United Great Britain, India, France, Japan, Germany, Republic of Korea, Brazil, Italy, Australia, United Arab Emirates and Israel. The fifteen countries here enlisted are responsible for the 81% of the total amount of military expenditure<sup>200</sup>. Moreover, even in two different sources from the SIRPI, both of them dating December 2017, “emerging producers”, namely countries that only have been facing that market sector recently (Brazil, India, Republic of Korea and Turkey enlisted),<sup>201</sup> are recognized. A logical assumption may be asserted following this statement: if the adjective ‘emerging’ is employed, it is intuitive that not only are new countries turning their attention to the production of weapons, but also, as a consequence, they need to invest their own national resources in it, taking off the opportunity of investments in other economic fields.

---

<sup>199</sup> *DARPA Launches Biological Technologies Office*, in “DARPA”, 2014.

<sup>200</sup> Pace, 2018

<sup>201</sup> *Global Arms Industry*, 2017; Fleurant, Kuimova, Tian, Wezeman and Wezeman, 2017

## **2.7 Conclusions**

The second chapter, for the subject discussed, has been the most objective and scientific one. It has provided with an in-depth description of chosen military weapons' structure, employment and effects both on the civil society and on combatants. Pragmatically, the detailed depiction has shed light on the increasingly interdisciplinary approach at the very base not only of nearly all the currently developed weapons, but also of the already existing ones. It means that the idea behind the creation and the production of a weapon encompasses more than one sector, with the consequence that they turn out to be a mix of different but eventually related fields. The structure is kept highly flexible and open to modifications or updates with the addition of elements from other domains, maybe apparently opposite or inconsistent. Especially biology has attracted a lot of attention by the industry, and by scholars for a matter of research primarily: in fact, it is more and more becoming one of the favorite disciplines to include. Evidently, biology is considered on the whole, encompassing all the species, with unquestionable repercussions on their cultural perception and evaluation. One of the common points of the weapons described above is the fact that their nature is dramatically controversial. Especially the combat drone, where the debate about its positive or negative impact on society has been explicitly expressed, displays the difficulty in assessing whether the employment of such weapons is really worth it or not. There might arise hard issues linked to ethics and law, responsibility of the use in front of the public and accountable to the law - as it has been written in the previous chapter. Also, the final perspective about the trends currently followed by the States as far as their exploitation of resources is concerned has demonstrated how the opportunity of available finances is assessed. It appeared clear how the amount of means has become a

determinant criterion to even influence other States' choices and behavior. Moreover, it gave some hints to carefully muse over the attitudes of States toward military and war as a natural entailed consequence. All the materials that have been employed, as even these last words have proved, will serve to develop, in the next chapter, some points about the issues or considerations arising from the specific characteristics of the weapons themselves.

## **Chapter 3**

### **The Impact of Recently Developed Military Technologies on Human Experience: a Philosophical Dissertation**

#### **3.1 Introduction**

Firstly, there have been an overview of some pressing issues new military technologies introduce from a legal viewpoint; secondly, the depiction of a series of military weapons currently employed has been provided; thirdly, here we are. This is nearly the end of the research, and we have finally arrived at the focus of the analysis. The third and concluding chapter of the work is the section in which the philosophical dissertation, appearing in the title and whose bases may be traced in the previous analysis, takes place effectively: that is the very reason why the title of the chapter is identical to the thesis's one. The points on which I will be focusing in the next pages, they see their roots in the study conducted, which may be rightfully considered the springboard allowing considerate reflections on the materials until now produced. All that I will be writing about is intrinsically related to the description of both the, I would say, problematic legal framework, where appropriate solutions to regulate new and recently developed weapons have been finding continuously, and the structural characteristics of the selected weapons. The aim concealed behind the idea of such a philosophical dissertation that will be developed shortly, was to pragmatically study the changes that have been provoked through the impact of the constant evolution of the technology in the military sector and effectively shed light on the related implications. Not only has it been felt necessary in order to

further clarify the context of international affairs that unavoidably influence our daily lives in nearly uncountable manifold ways; but also help keep mind wide open. It has to make most of the people realize how to perceive correctly what is currently going on through a comprehensive point of view. It is of fundamental importance to be consciously aware about the multifaceted, multilevel, multicultural and full of colorful peculiarities world history. More specifically, the list of the topics I will touch on is as follows: the limitations of cyberspace; the relationship torture, power and technique; the media and International humanitarian Law. The first topic will analyze all the limitations that cyberspace creates and its potential implications: in particular, the lack of definition of the civil and military area, as well as the absence of clarity between what is considered public or private sphere. The second topic will talk about the existing relation between technique, currently on top of the hypothetical hierarchically ordered pyramid of power, power itself, and torture. Torture in particular plays an important role in the international law beyond doubt, and its interpretation, as far as new technology is concerned, turns even more crucial. The third and final topic will explore the role of the media when the International humanitarian Law enter the press: in particular, the potential help that it might give the International Committee of the Red Cross to educate about the International Humanitarian Law by telling facts from an expectable transparent standpoint.

### **3.2 Cyberspace: Limits, or no Limits?**

When we normally think of space and its concept, the first and most conventional idea suggested by our empirical human experience is our living space. It is composed of the ground we walk on; the water we swim in or where we sail on; the air we fly in. Their visibility and tangibility allow a quite easily affordable perception and both a pragmatic and theoretic definition as well. However, when it is time to turn our attention to the web and virtual space, things change dramatically: in fact, we can only see it through a screen. The virtual world might be interpreted through the metaphor of a truly endless horizon: absolute determination is merely inconsistent, unless it is not taken action to give it a precise shape. Such a procedure cannot even be taken for granted at all, due to the absence of precisely definitions. As the paragraph 1.6.1 describes, no clear fixed terminological pillars have been established yet. This lack of delineation is a structural issue, since it comes from the very origins of the virtual world: as I wrote in the 2.4.1 paragraph, cyberspace is a human creation.

Thus, basically, there are no limits to the drawing of the cyberspace, except for the naturally limits intrinsic to the human condition. If there have not been an appropriate definition, the implications will influence its whole future development and history. Moreover, a virtual world being, therefore without seeable and concrete boundaries, the individual and autonomous recognition is highly complicated. With such a creative ability, humans, in this very case programmers, might be seen, up to a certain extent, as a Demiurge, a creating power with the ability to forge an entire world, a parallel system governed by its own laws and influenced by beings living in it. Humans are also effectively at the very origins of the users' profiles spread in the virtual world. Not only are they responsible for the creation of the

population of a precise area of the web, but also for the admittance, following specific provisions or requirements – by them established. Also, it will be defined duties, potential hierarchical orders, values and so forth. As it has been written in the first chapter, all the profiles of the users are not bound to be completely true: data can be assembled nearly casually, even though the provision of coherence is recommended to make it appear as truthful as possible. On the basis of what have been said, it seems that the idea behind the book of Pirandello “Uno, Nessuno, Centomila” appropriately enters and perfectly suits the topic. Even though the concept has been previously applied to the concrete reality, it is indisputable, basing in what has been and will be written, that the virtual world, for the lack of definition, is a field of an even more appropriate application. One single programmer is totally free to create as many profile as preferred, and each one with a more or less specific and delineated personality. The traits to add are literally uncountable, even because the concept of profile, and the related characteristics, is completely fluid. The variables to take into account are nearly incommensurable, and the attributes to put in a profile character cannot be even figured out, since they are fully linked to the creative imagination of the creators themselves. There can be thousands of potential combinations of features, with a lowering probability of finding perfectly identical profile across the entire web, unless it has not been done on purpose. Clearly, the culture of the creator, in all its manifold elements, is a parameter that cannot be overlooked at all, because it might be one of the major influencing factors of the final product beyond doubt. As a result, relativity can be rightfully affirmed a real leading force, with the singular interpretation as the instrument to read the virtual reality. No unique and unchangeable aspects are potentially possible. Moreover, modifications can be made to a profile, possibly altering the personality of the user and the perception given to the other components. They being

based on codes, the opportunity to trace the detailed history of the development of a single user is absolutely allowable. Profile after profile created, even an entire community, a sort of virtual population, might come from the same computer user. Eventually, it is quite intuitive to understand that nobody shall be completely sure about the profile found on the web, their origins, their truthfulness, their singularity: with numerous identity issues arising hence. Uncertainty can be legitimately affirmed the sovereign today: data and information cannot be associated to a precise context, any profile cannot be confirmed; only the presence on the web is 100% sure<sup>202</sup>. As it has been extensively explained within paragraph 1.6.4 about responsibilities, this total absence of certain references about the identity of the users challenge the attribution of their action.

The aforementioned consideration about human essence behind the virtual world does not end here, because every single element composing the web is merely a human creation through a precise series of code: it is the programmer, or the person in charge of the launch of the project at the very base, who normally decides the sequences that will forge them all. Cyberspace is effectively a programmed extension, whose origins can only be defined by the very programmer and especially by the decision-makers who have been at the head of the project aiming to create that very web area: nobody else will be allowed to apply modifications, and in case it were decided so, the use of a precise series of codes is necessary. The mapping out consists in outlining virtual coordinates, alias the precise points from/to where each area expands and activity may be conducted. As far as the normative framework is concerned, talking about the rules governing the system, the programmer is completely free to conceive the most fitting order to the dimension, apart from the fact that he has to deal with the law of physics,

---

<sup>202</sup> See notes 97, 98

which cannot be overlooked obviously. The very limit is the one that has been set, neither a portion of more space, nor less one. As it has been told above, a human at the head of everything being, the lack of delineation can be applied nearly to all the constitutive elements. Since we finally end up with a totally new world, even the method to provide with its measuring is fully left to the creator.

Accordingly, the blurriness of the boundaries is evidently manifest, and its implications impact in defining our living space too: the public and the private spheres, as well as the division between what concerns civil and military, can never be claimed with certainty. Conversely, they are continuously and constantly overlapped one another. The former concerns the distinction between our information we allow to be disseminated in public and the more intimate one we prefer to keep for smaller groups; while the latter traces the civilian security line, because it separates the space where military operations can be undertaken and the one where civilians are supposed to be allowed to live with no threats. In order to depict a deeper frame, it is essential to take pragmatic instances into consideration. Those that have been chosen are WikiLeaks, the case of Edward Snowden, and the use of social media by the ISIL (Islamic State of Iraq and the Levant), because they will show effectively the difficulty in separating these fields. Not only are the aforementioned domains binomially related, but also the four different categories intertwine reciprocally, making the context even more complex. They will serve as proofs, from their own peculiar viewpoint, to demonstrate how far they will go poisoning the integrity of spheres' limits. Since the aim of the next analysis is interpreting these cases in the light of the topic of the paragraph, a complete frame of them will not be furnished, but only a partial narration.

WikiLeaks and the case of Edward Snowden are related to the dissemination through Internet of private State information to the

American society initially, and to the entire world as a consequence then. The case of WikiLeaks<sup>203</sup> dates back to 2010 when a 17 minutes-long video about the American soldiers conduct in Iraq has been released: it is been shown the murder of a dozen of Iraqi civilians committed by soldiers stationing on helicopters. Unfortunately, they have not been the only proof WikiLeaks had: in fact, later other documents denouncing further unlawful behavior have been diffused.<sup>204</sup> The aim of WikiLeaks was making people realize what was actually happening in the Middle Eastern area, ensuring the truth and avoiding that the government might conceal operations undertaken by the American army. However, in so doing, even though providing with transparency and honesty is apparently an honorable duty, a hole connecting the civil and military spaces that will never be fixed anymore have been created. All the people across the world provided with a free access to the web could get that very information previously belonging to the government solely. Nearly every person living on earth could read several papers or watch videos related to delicate situations responsible for the world order, the international security and peace. On the other hand, as far as Edward Snowden<sup>205</sup> is concerned, he disseminated data of the NSA (National Security Administration) operations: in particular, he revealed that the intelligence was tightly controlling, recording and storing every movements of the American society, either their surfing web or their phone calls. Basically, they were tracking nearly every form of communication. Initially, the Guardian reported that NSA was engaged

---

<sup>203</sup> “WikiLeaks is a multi-national media organization and associated library founded by its publisher Julian Assange in 2006 specializing in the analysis and publication of large datasets of censored or otherwise restricted official materials involving war, spying and corruption.” as stated in <<https://wikileaks.org/What-is-Wikileaks.html>>

<sup>204</sup> J.Becker, S.Erlanger, and E.Schmitt. *How Russia Often Benefits When Julian Assange Reveals the West's Secrets*, in “The New York Times”, Aug. 31<sup>st</sup> 2016.

<sup>205</sup> “a former US National Security Agency (NSA) contractor, [...] ex-CIA systems analyst” as stated in <<http://www.bbc.com/news/world-us-canada-22837100>>

with this collection of a kind; only afterwards the name of Mr. Snowden was diffused. However, Pandora's box was already open: the Washington Post joins the Guardian dealing with the issue, and they both, with an in-depth research, found out that these surveillance operations were part of a huger program – the *Prism* – in which, among other firms, Facebook, Google, Microsoft and Yahoo were involved too<sup>206</sup>. Reporting Mr. Snowden's words<sup>207</sup>, it is evident that again transparency was asked for, with a call for the respect of everyone's privacy added. Art.19 of the Universal Declaration of Human Rights of 1948<sup>208</sup> assures everyone to be free in expressing ideas without interferences of any kind: is this surveillance supposed to be considered an interference? The answer is hardly given, because there are lots of considerations arising. Apparently, there might be positions in favor of the statement above, because it seems an obstacle for a completely pure expression. However, opinions providing with different types of justifications might arise. One among all, and possibly the most intuitive, the idea that the collection has the major aim to assure security to all those who can be rightfully named 'American citizens' – in the case taken into consideration: the lack of total freedom, the surveillance pragmatically being a theft of a little portion of the assigned freedom, is the price to pay for a higher level of security and strive to make most of the people safe and sound in their home-country. People cannot expect at all of being protected without some losses or sacrifices: in order to provide with national security service and implement them constantly, for an increase of level of

---

<sup>206</sup> *Edward Snowden: Leaks that Exposed US Spy Programme*, in "BBC News", Jan. 17<sup>th</sup> 2014.

<sup>207</sup> He explicitly says: "I don't want to live in a society that does this sort of things... I do not want to live in a world where everything I do and say is recorded.", *Edward Snowden*, 2016

<sup>208</sup> "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers", "*Universal Declaration of Human Rights*", Paris, 1948. Art. 19

protection, the acquisition of a huge amount of information is needed. The accurate and careful study of the community itself in all its characteristics and across its levels is the only method to do so. Therefore, the only choice seems to be the trade-off between higher protection and full freedom. It is anyway correct to affirm that, in case the aim is set in good faith, meaning that the guarantee of a better protection is at the very origins of the program, the majority of the people is likely to consent a little rearrangement of their rights; on the contrary, in case the big brother style is running the government, things should be read in a totally different light. Unfortunately, there are no precise means to measure the real inclination: as a result, blurriness remains stable - joining the already existing blurriness - and the key to unloosen the knot is hardly to be found.

Now it is time to turn attention to the use of social media as a weapon. The ISIL especially have been mastering it very well for ages: consequently, troubles in delimitating military, or better, managing operations linked to act of terrorism and related to war, civil sphere and even more private areas, have risen. They have been smartly exploiting all the features and the possibilities the media give, in order to organize themselves effectively. As Shane reports, Telegram<sup>209</sup> has been employed as a tool not only to plan terroristic attacks, but also as a source of coordination for the groups involved in the terroristic activities. It is a commonly used social network, whose apparent purpose is keeping in touch people and sharing information or documents. The terroristic group has exploited the conventional utilization of the app in order to conceal, especially behind its encrypted trait, an antisocial behavior. They completely withdrew the origins of Telegram and provided it with a

---

<sup>209</sup> “Telegram is a cloud-based mobile and desktop messaging app with a focus on security and speed.” <<https://telegram.org>>

potentially destructive connotation<sup>210</sup>. If the Twitter is taken into consideration instead, it is evident an effective use of social media marketing with an organized social media strategy backing. They have launched hashtags campaigns in order to develop engagement and recruit new followers. Such a goal is reached exploiting the basic functioning of the social network, which is the opportunity of re-tweeting the interested tweets. They have even projected a Twitter App named “The Dawn of Glad Tidings”: it is supposed to provide updated news about operations ISIS usually undertakes<sup>211</sup>. Therefore, the use of Telegram and Twitter as a weapon is primarily explained through its employment as a logistic tool. Furthermore, even Youtube and the diffusion of video recording crude executions, as the article of Rothwell demonstrates<sup>212</sup>, might be considered a weapon, to the extent that it threaten and fear. It is sufficient to google ‘youtube isil’ to be given a list of the aforementioned videos the ISIL has produced recently. Youtube<sup>213</sup> was born “to give everyone a voice and to show them the world”, as it is stated on its website<sup>214</sup>. Continuing the browse on the right above given website, the word ‘freedom’ appears so many times, in order to strengthen the inalienable right of persons, as explicitly stated in the Universal Declaration of Human Rights of 1948<sup>215</sup>, to express themselves without fearing of being judged<sup>216</sup>. Also, it boosts the importance of acquiring information and finding support from the people believing in

---

<sup>210</sup> H.Shane, *This is ISIS’s New Favorite App for Secret Messages*, in “The Daily Beast”, Nov.17<sup>th</sup> 2015.

<sup>211</sup> J.M.Berger, *How ISIS Games Twitter*, in “The Atlantic”, 16<sup>th</sup> June 2014.

<sup>212</sup> J.Rothwell, *Isil Releases Beheading Video Featuring Paris Attackers*, in “The Telegraph”, Jan. 24<sup>th</sup> 2016.

<sup>213</sup> “YouTube is a video sharing service that allows users to watch videos posted by other users and upload videos of their own. The service was started as an independent website in 2005 and was acquired by Google in 2006.” as stated in <<https://techterms.com/definition/youtube>>

<sup>214</sup> <<https://www.youtube.com/intl/en-GB/yt/about/>>

<sup>215</sup> see note 208

<sup>216</sup> <<https://www.google.it>>

the same values<sup>217</sup>. They might be universally accepted rights, but it is extremely likely that they were thought for being applied in good faith. That being said, the core of the consideration is that ISIL's behavior has been causing a complete contamination of a part of the virtual space that was initially planned to be at total disposal of civilians and their more or less leisure activities. A person might be browsing videos uploaded to Youtube and accidentally bump into the video of an execution or any other activity linked to terroristic groups, with a potentially damaging impact on sensitiveness.

The analysis can be even developed more extensively: in fact, following what have been until now written, through such a trend, not only can media in general be weaponized and enter the battlefield, but they could hypothetically substitute army completely too. If the effectiveness is taken into account, referring to what have already been written in the second chapter, but even by taking a careful attention on the features of the different kinds of media, it is evident how they financially and logistically are a step forward compared to the majority of the other current weapons. Even though it is universally accepted that at the beginning the economic and financial burden, as far as the development of software and the related costs of the intellectual property is concerned, might be huger, finally, the savings will be of a considerable importance. On the other hand, the consideration might overcome the mental casualties possibly hit: although the absence of a concrete body avoids physical injuries or sufferings, damage to persons and their psychological balance cannot be totally excluded. And the potential implications might end up with physical self-torment, even though they did not begin with such a purpose. This point recalls evidently the entailments of the biological and chemical weapons that have been described above, in the very case they are employed to threaten and as a

---

<sup>217</sup> <<https://www.youtube.com/intl/en-GB/yt/about/>>

deterrent<sup>218</sup>. Moreover, the total substitution will be clear and further explained once the next paragraph will be read. In fact, it will be written that technique currently is a totalizing force, which encompasses the whole world. Specifically in this context, media, mainly new media that have the chance of effectively exploit the rapidity of dissemination of information across the globe, provides with a dramatically extensive and totalizing power.<sup>219</sup> The consequence of such a direction is that, media being part of the technique, and considering their high speed of development, the totalizing potential in the field of weapon is hypothetically possible.

---

<sup>218</sup> See note 146

<sup>219</sup> L.V.Tarca, *Tortura, dolore, potere. Per una lettura orwelliana del tempo presente* in T.Masini (a cura di) *Verità e negazione. Variazioni di pensiero*, Venezia: Cafoscarina, Sett. 2016. p.279

### 3.3 Technique, Power, Torture

#### 3.3.1 Technique and Power

Tarca explicitly underscores how technique today is an idea that encompasses our life totally. Not only is this consideration made quantitatively talking, therefore dealing with all the elements of nature, in his more pragmatic meaning; but also from a qualitative point of view. Precisely, the last term means that every purpose the humanity set is finally reached. The most direct consequence of this totalizing approach is the full and complete objectification of the world, with no exceptions in any manner<sup>220</sup>. With 'no exceptions' human beings are also included, with the consequent loss of their more human traits, and the potential permission of whatever action on them. The humanity is totally ignored, it is not recognized as an essential and unavoidable trait of the human nature<sup>221</sup>. Moreover, humans, tamed by technology, risk ending up being treated as they currently usually behave with animals, with the entailed effects of course. In the current system where humans are the leading force and animals the subjected being, it is not even hypothetically thinking about the chance of overthrowing order: animals are bound to their condition, and their condition is irreversible. The same may happen to human with technology: once the technology has obtained a legitimate power, humans are bound to be subjected to it. After such an insight, it can be noticed a reduction of anthropocentrism, and the conscious

---

<sup>220</sup> L.V.Tarca, *Lo spirito della tecnica: dal potere all'onnipotere* in T.Masini (a cura di) *Verità e negazione. Variazioni di pensiero*, Venezia: Cafoscarina, Sett. 2016. pp.265-67

<sup>221</sup> G.Goisis, *La tortura: alcuni aspetti antropologici*, pp XXXV-LX, in L.Zagato, S.De Vido (a cura di), *Il divieto di tortura e altri comportamenti inumani o degradanti nelle migrazioni*, Padova: CEDAM, 2012. pp.XXXVIII, XXXIX, XL

realization of purely human condition and limits<sup>222</sup>. As a result, an asymmetrical relationship is established, according to which the power is detained by the one who has or those who have technology, or better, the most updated and as perfect as possible technology. The one who commands is extremely hierarchically ordered than the one who stays under the legitimate power. Since the objectification is total, the power obtained is nearly unlimited and absolute: so being, it resembles the omnipotence. Consequently, a quite intuitive reference is to religion, and the power given to god. Technologies provide with a total power, reminding, for its comprehensiveness, of the omnipotence of god. In order to strengthen the concept, Tarca employs the term *teotecnocracy*: θεός (theós) + τέχνη (téchne) + κράτος (kràtos). The example employed, that represents a sort of symbol in this case, to further demonstrate this idea is the atomic bomb. History taught us about the full destruction of Hiroshima and Nagasaki, the cities hit by the weapons falling down from American aircraft. They provoked the total disappearance of two communities, only leaving the marks of the attacks. The consideration is further justified by actual news. In fact, the perception about what is always reported is that States with nuclear power appear to have the ability to decide, with a kind of god-like power, the destiny the whole international community. The same analysis might be carried out as far as biological and chemical weapons are concerned: in fact, they employ the same substances and component produced by nature, recalling the total objectification, to attack and conquer power, to subdue the same nature<sup>223</sup>. In order to support the assumption aforementioned of the god-like power that technology gives more extensively, the “world systems approach” theorized by Wallerstein is exemplary. In fact, it claims one

---

<sup>222</sup> L.V.Tarca, *Tra animali e tecnoanimali, aspetti dell'evoluzione umana nel tempo a venire* in T.Masini (a cura di) *Verità e negazione. Variazioni di pensiero*, Venezia: Cafoscarina, Sett. 2016. pp.311, 313-315, 320

<sup>223</sup> *Lo spirito della tecnica*, 2016, 265-67

and only a leader for each system. This leader has a multifaceted and multilevel power ensuring its hegemony, which encompasses, among the other resources, military and economic power<sup>224</sup>. The characteristics of the combat drone, which have been described in the second chapter, allow the development of the concept to a broader extent. In fact, it enlarges the distance between the responsible for throwing the attack and potential targets. The hierarchical order, as it has been explained but here necessarily repeated for its relevance, is carried to another level; it is extremely underscored due to the absence of one, who is operating remotely, of the two necessary elements. The conditions having changed dramatically, the dialectic relation cannot persist anymore: conversely, it has been carried to its farthest consequences. The concept of fighting face to face, the duel, the traditional paradigm of war, is very likely to disappear with the advent of new technologies: it constitutes a cultural turn not to be underestimated <sup>225</sup>. That being said, a couple of considerations about the concept of total power are necessary. The first is the inconsistency within the concept itself. Power naturally needs a dialectic relation with the element subdued to the power itself, because it is the necessary element for power to exist concretely, the very manifestation of the asymmetrical relation. However, when the adjective absolute is added to the idea of power, the perception is that the power can exist by itself, because, total being, does not need anything else. As it has been told previously, power needs an element to command; otherwise it loses one of the existing conditions. We arrive as a result at a paradoxical situation, which cannot be further carried out. The other limit to the idea of total power is the fact that it is created, in this very case, by humans. Every person is intrinsically limited by the own human

---

<sup>224</sup> I.Wallerstein, *World-systems Analysis: an Introduction*, London: Duke University Press, 2004.

<sup>225</sup> See note 119

nature. As a result, men cannot establish an absolute and total power, because their nature does not allow them to do so at all<sup>226</sup>.

In the second chapter, and in the first paragraph of this one too, the human creation power is depicted: here the topic is to be recalled necessarily. In fact, there is another instance of men's ability to provide with a new shape the very elements of nature and build new forms of life<sup>227</sup>. However, this sort of creating power has brought the development too far in the distance, because it provoked an evolutionary step beyond humans: in fact, through the technological advancement, men have been able to give birth to another species, whose origins are traceable in the technology itself. A clarification, compared to what has been stated right above, is highly recommended in order to tackle the topic adequately. This new species is not being produced directly from nature, but by the culture (technology) instead, coming from the human actions on earth: therefore, it is a product of a humans' product<sup>228</sup>. A primary trait of theirs is that it will not end up under the power of their creator, as it has happened until now: on the contrary, it will pose itself above potentially. As a result, the new era, starting from the humans' loss of power, will rightfully named post-human era: men will have no more the chance of forging or destructing, as they prefer most, the world where they live; conversely, other forms will choose the progress of history<sup>229</sup>. Tarca employs three terms to explain the level of superiority of the new species. The first is "superumani" ("supermen"), therefore supermen basically: they are super with the connotation of better, because they are an improved version of the mere human. The second term is "sopra-umani" ("above-human"), in order to underscore that they will live on another level, above the one that humans have been traditionally got used to.

---

<sup>226</sup> *Lo spirito della tecnica*, 2016, 268

<sup>227</sup> See note 146

<sup>228</sup> *Tra animali e tecnoanimali*, 2016, 314

<sup>229</sup> *Lo spirito della tecnica*, 2016, 269, 270

Finally, the third term is “oltre-umani” (“beyond-human”), to specify that they will be part of another system, beyond the humanly built history. The issue may be further developed. In fact, since the technique heads to a totalizing direction, it is not very likely that something could arise and later in the future place itself above the technique. On the contrary, the totalizing trait of the technology will boost the relation between the leading power and the subjected category: it being strengthened more and more over the next years, there will occur an hardening of the level of violence as a consequence<sup>230</sup>.

The concluding assumption that will be studied claims humans trust in the progressive improvement of the history. The starting point is the idea that the leading force is the one the majority accepts: if it is accepted, it is considered true and right. It is so assessed mainly because it is particularly suitable to the very structure of the system, instead of following a principle of justice: adaptability and compatibility become the criteria. A negatively structured selective procedure is followed: it bases on the principle of exclusion, where all those who do not fit the framework have no chance of going on in the race for obtaining power. Only one will turn out the winner, all the other will be subjected. The same logic will be applied to the people who will be populating the system itself. The leading force will disseminate the right considered ideas, and the selected population will be the one who is suitable to follow those guidelines. In the very context of technique, the process is even more pronounced, because the product has been meticulously projected, after the elaboration of manifold different elements. Since we are seeing that it is technology the new leading force, and it is especially linked to the military domain, violence is turning normal. Moreover, and here we can begin to see the connection to the initial consideration, the belief of a progressive improvement risks providing violence with a

---

<sup>230</sup> *Tra animali e tecnoanimali*, 2016, 314, 323, 324

justification: violence is fair and right because it is intertwined with technology, the progress, consequently better. As a result, right and acceptable, with a relativistic perception of the idea of justice and injustice, even with the correspondence of the concepts of violence and justice then, will occur. Everybody will be skeptical about figuring out a different order, since the one in which there are involved is presented as the best possible. There would be no reasons for the provision of changes in order to get to a different organization or the abstention from an appropriate compliance<sup>231</sup>. We will get to the point where humans will not be the leading force anymore, and the anthropocentrism that has been dominating the culture since the Middle Ages nearly stop existing after a thousand-year supremacy. This new species, furthermore, coming from the field of information, will be quite unloosened by the concrete world: new rulers will be living on the hypothetical fence between the concrete world and the virtual one, on another world ad hoc. They will be consequently, at least to a certain extent, independent from politics and from all the traditional forms that used to support all the preexisting powers. Eventually, a new system should be established, with a proper frame ruled by consistent and relevant provisions and with a peculiar inner logic as driving force<sup>232</sup>.

### **3.3.2 Power and Torture**

Another element unloosely linked to the concept of power is torture: it will be shortly clarified why. The explanation begins when torture is not considered a means as usually it is, but a purpose instead. The reason behind this argument comes from the idea that torture is an essential component of power, and power is end in itself. Torture is a basilar

---

<sup>231</sup> *Tra animali e tecnoanimali*, 2016, 318, 319, 322, 327

<sup>232</sup> *Lo spirito della tecnica*, 2016, 269, 270

component of power because it is the very evidence of the natural asymmetrical relation intrinsic in the concept of power itself. Power, in order to be legitimated, has to be recognized by all the elements composing that very system: in this case, by the people living under a specific government. Torture, as a consequence of arising behaviors trying to overthrow the established power, is pragmatically the proof of the existence of the power itself. It raises awareness about the constituted situation, the ruling power and the existing organization of the system. The awareness of the legitimate power is the recognition of its uniqueness too: therefore, of its omnipotence. Violence, it being fully integrated in the system, acquires a logically ordered organization and becomes a usual procedure constantly undertaken. Since power has torture at its total disposal, it can also decide when using it or preventing from the use. It can produce pain, threaten to use or interrupt the execution following its own preferences. As previously told about the necessity of the torture, it is consequently mandatory that it cannot be nullified at all: it can only be transferred from one to the others. The complete nullification of the pain can only be achieved by the total subjugation: in that very case, power simply quit existing, because rebellion and torture are no more necessary<sup>233</sup>. Drawing conclusions, the following consideration is extremely useful to provide with a consistent depiction of the torture. Tarca writes that truth is considered what is necessary and unavoidable, because it is essential to reach precise goals: it is consequently recognized legitimate and effective. Thus, the power under discussion is legitimate<sup>234</sup>. Truth is not naturally objective, since it relies upon the satisfaction of the basic needs of the system it is included in. More pragmatically talking, it is the power responsible for deciding these needs, and therefore the same idea of truth. If it is true and

---

<sup>233</sup> *Tortura, dolore, potere*, 2016, 274-278, 280, 281

<sup>234</sup> *Lo spirito della tecnica*, 2016, 271

legitimate, all the people recognize it as right and fair. Rebellion against such a considered power is an intrinsically incorrect and wrongful objection, because tries to overwhelm a government that has been legitimately established. Since power is legitimate, even the torture is so, and consequently authorized<sup>235</sup>.

All that have been written until now explicitly confirms a punitive logic behind the idea of justice. It bases on the procedure that entails punishments to anybody behaving against everything that is socially accepted as right, because they are in so doing challenging justice: therefore, if they strive to oppose themselves to justice, they are unavoidably going wrong. Especially, violence being completely integrated in the system, it is the very essence of the punishment itself<sup>236</sup>. Goisis takes into account the data of Amnesty International on Torture. According to it, 132 countries usually employ torture: however, they try to hide the traces of the practice. On the basis of this brief statement, a couple of considerations can be made, showing States' substantive contradictory behavior. The first is that torture is evidently a widespread practice, as data proves. The second is that States employ torture consciously, but they do not want to make the world known about their attitudes. It might be asserted therefore both an aware absence of compliance and the willingness of committing wrongful actions<sup>237</sup>. Furthermore, in order to avoid any a knockdown effect, Goisis writes that every exception should be avoided. Later, it will end up with a completely new and different system, diametrically oppositely ordered compared to the one of the beginning. Exceptions in fact are likely to be used as justifications for unrespecting the provision: step-by-step, they risk jeopardizing the balance established with the legitimate power<sup>238</sup>.

---

<sup>235</sup> *Tortura, dolore, potere*, 2016, 284, 288-289

<sup>236</sup> *Tra animali e tecnoanimali*, 2016, 320

<sup>237</sup> Goisis, 2012, XLIII

<sup>238</sup> *Tortura, dolore, potere*, 2016, 288-289

Cassese explicitly confirms his disagreement about permitting precise methods of torture too: he evidently supports the potential effects of such an approach, especially the enlargement of the frame in which the permission to torture is inscribed. Goisis then provides with a concrete example of the peculiar approach of the states by comparing the European Union and United States of America's behaviors. While it is evident that EU strictly complies with the prohibition of torture, USA is much more apt to allow exceptions to the provision. The aforementioned inquiry, with the last concrete instance, shows that not only are they witnessing the inconsistency between theory and practice, but also the cultural turn which impacted the world as a whole. While after the end of the Second World War, possibly with the very recent experience of the total and extensive destruction of both humanity and earth, human rights were looked up very much, currently States seem to overlook them too frequently. They demonstrates a different and quite contrary approach compared to the time when human rights caught the attention not only of the scholarship but of the common opinion too: in fact, the commitment to ascertain the protection of fundamental human rights is lowering more and more, and their respect results quite underestimated. Paradoxically, today the International Human Rights Law is one of the most debated legal bodies: as if the more it is discussed, the less it is assured<sup>239</sup>.

Bearing in mind all that have been exposed until here, since the very beginning of the research but particularly seeing the second chapter, it is evident how diplomacy is step by step put in the corner, though it is far from being established a total avoidance. Also, by considering what Tarca writes at the end of his essay, the consideration above results further accepted and developed. In fact, it is asserted that omnipotence, and the related asymmetrical relation, will avoid establishing agreements.

---

<sup>239</sup> Goisis, 2012, XLIV, XLVI

Therefore, diplomacy will be challenged to a higher degree. Far from saying that thanks to diplomacy every issue related to international politics is bound to be solved with no concerns, it is conventionally claimed that political fora and all the potential forms of discussion are possibly the most suitable and effective method to comprehensively discuss<sup>240</sup>. Also, it is extremely useful to pay close attention Clausewitz's words about war: it supports that war can only be a means to reach political goals already set, because the war itself with no other aims fixed merely end up with the reciprocal destruction of the armies<sup>241</sup>. Taking a careful look at what is happening currently and bearing in mind what have been already wrote, the trend is completely opposite to the one Clausewitz enounced, because the very purpose is the complete destruction of the enemy and not only a confrontation of means and resources. It demonstrates how the military is employed as the means to obtain power: therefore, how power is related of the monopoly of violence<sup>242</sup>. If this is the tendency, it is easily intuitive that relying upon politics is not the primary action taken by the majority of States: also, the idea is additionally strengthened again by the data about investments in military technologies<sup>243</sup>.

A general consideration looking at the history of mankind is particularly suitable before a final statement to conclude the paragraph. Across all its phases, it looks plenty of events proving such a statement, because it is a constant effectively and pragmatically observable, even though without mentioning any particular episode. Goisis claims a basic human pleasure of cruelty as a characterizing cultural aspect. The very origin of such a desire is the ambition of obtaining power. In particular,

---

<sup>240</sup> *Lo spirito della tecnica*, 2016, 272

<sup>241</sup> C.Von Clausewitz, M.Howard and P.Paret (Eds.), *On War*, dited and translated by M.Howard and P.Paret, New Jersey: Princeton University Press, 1989. p.7

<sup>242</sup> *Tortura, dolore, potere*, 2016, 278

<sup>243</sup> *Lo spirito della tecnica*, 2016, 272

the chance of establishing an asymmetrical relation and consequently committing violence. Moreover, the higher the level of cruelty is, the higher the degree of pleasure can be. Pleasure and cruelty are therefore related with a (infamous) directly proportionate relation<sup>244</sup>. In the text of Tarca it is named *sympàtheia* or world *philia*<sup>245</sup>, while Goisis mentions Baron-Cohen and the concept of empathy and Husserl and the idea of entropathy: however, they head to the same result. They basically deal with the perception and the opportunity of identifying with the other human beings' emotions and feelings, with effects on the behavior of the same perceivers. This ability, a peculiar human one, allows to emotionally and personally keep in touch with all the others: more specifically, and most importantly, it consents the realization of what have been studied right above.

Now, I will draw conclusions with a very striking thought of Goisis: keeping the same standpoint of Kant, he further develops the reflection of the very action of torturing. In fact, he argues that the loss of humanity, the loss of the dignity every human being is naturally and intrinsically endowed with, is completely removed at the very beginning of the action itself. It is a degrading behavior for all the people involved, regardless of the role they play in the context. It is a simultaneous and unavoidable process, during which at the executor the dignity is denied, and at the victim is stolen. They undergo two different process of privation, but they are essentially bound to get to the same result: the loss of the dignity, a fundamental human right that is legally not derogable under any circumstance<sup>246</sup>.

---

<sup>244</sup> Goisis, 2012, LIII, LIV, LV

<sup>245</sup> *Tortura, dolore, potere*, 2016, 278

<sup>246</sup> Goisis, 2012, LVI, XLVII

### **3.4 Media and International Humanitarian Law**

One of the pillars of this research has been the information revolution and the effects that it brought to social life: whether it might be positively or negatively assessed, the denial of such an impact would not be honest. Sufficiently explanatory as pragmatic example, there is all that has been written in 3.1. It is without surprise that the media plays an active role in influencing the perception of International Humanitarian Law: in particular, how the war crimes can be evaluated. Goisis underscores the value of the media, regardless of the form of media taken into account, from the most traditional journalism on papers to the more recent tweeting, to spread the word about the fact occurring across the world with a special attention to the most delicate and urgently needed of aids areas. This echo, as mentioned above, might be more or less negative/positive, but it remains anyway a means to homogeneously raise awareness and acknowledge. Also, as it has been said in the first chapter, they will provide with a sort of publicly recognized control of compliance. Goisis refers especially to the possibility of echoing the breaches of the International Humanitarian Law, emphasizing the violations States commit due to inconsistent behaviors. More precisely, he focuses attention on violations of human dignity, and specifically on torture. What undoubtedly acquires a dramatic importance is their ability to only stick to true facts, and honestly reporting what truly occurred. In fact, journalists are apparently gaining the real power of influencing international politics, and to a certain extent to forge the future of the world, with their own words. It is here recalled evidently the creating power that has been already mentioned previously. They pragmatically have the potential to provide with an entire community with a specific knowledge: ergo, the chance to create a frame, a system following the same information, values and rules. It is extremely

interesting therefore noticing how there might be manifold connotations that this ability could gain, and as numerous as interpretations depending on the field where it is applied. Thus, the news has to be studied with a careful attention, and it is of crucial importance accurately considering verified information and data provided.

However, there are some limitations, either objective or subjective, that prevent from an as truthful as advisable work. The range of limits can start from rumors that, when are disseminated, moreover if it is done on purpose and totally avoiding good faith, might raise hatred: the following consequences are at least dramatic. The cases of alteration or modifications of information are dangerous as well, because they consent misinterpretations potentially carrying far from reality<sup>247</sup>. Despite these interpretative obstacles deriving from the personal touch of a journalist or more generally disseminator of information, there have to be taken into account even the less personal and more objective ones. This is the reason why few correspondents can provide with a complete picture of the events they participate in. The limitations can come from the context: for instance, the denial of a precise government to admit in its territory foreign journalists; or, undoubtedly more relevant to the subject of the research, the advancement of technology. Now, I will analyze this limit with much more care. The development of military technologies, as I have been writing throughout the entire study, increases the stakes and heightens the degree of the risks for all the people spread in the space of the armed conflict. In fact, the effects of the newly produced weapons are more dangerous and destructive compared to those of the more traditional ones. Beyond doubt, through this statement, I am not underestimating all that occurred with the war in the XX century and what is now going on especially in the Middle Eastern areas: in so doing, I would deny on purpose unnecessary sufferings and injuries affecting

---

<sup>247</sup> Goisis, 2012, XLI

millions of people. On the contrary, I am only affirming that, the more the weapons is technologically advanced, the higher is the potential damaged provoked on the very location where the weapon is employed. Another limit included can be a financial one, therefore the provision of basic resources to consent the adequate placement in relevant locations. The implications of all these impediments are as follows: the low number of foreign correspondents might bring to a more superficial expertise about a specific topic and a rougher quality of the journalism. Every repercussion can influence and heavily impact negatively on the information disseminated<sup>248</sup>. Furthermore, another consideration is necessary about the more or less detached position of the correspondent. The perspective, the lenses through which the events are presented, depends on the variable degree of distance from the event itself: the closer journalists are, the more they might be emotionally impressed. According to this option, results are all a matter of subjectivity and personal reaction to the impact of the images seen<sup>249</sup>. Fruitful thought to feed this argument, Hunt introduces the case of 'embedded media', especially if attention is paid to American army: they have been established in Iraq shortly after the 9/11. At the core of the project there was the evidence, noted by the U.S. Department of Defense, of media power in shaping how public could perceive international security (the link to the aforementioned power of the media is explicit). Embedded media based on the idea of permitting to American journalists to live with troops, as if they were a real part of the units. The purpose was to allow an in-depth inquiry and consequently a detailed a multilevel understanding of the facts. However, a spontaneous question rises: was it

---

<sup>248</sup> J.W.Finney, *Media Limitations in Reporting Crimes Against Humanity*, in J.Carey, W.V.Dunlap, R.J.Pritchard (eds.), *International Humanitarian Law: Challenges*, Ardsley [New York]: Transnational Publishers, 2004. pp.1, 2

<sup>249</sup> K.Hunt, *The 'War on Terrorism'* in L.J.Shepherd (ed.) *Gender Matters in Global Politics, a Feminist Introduction to International Relations*, London and New York: Routledge, Taylor & Francis Group, 2010. p.123

thought to provide with a depiction in good faith? More explicitly, was it meant to follow the soldiers' perspective and therefore present the relative correct version of the facts?<sup>250</sup>.

The lack of a constant and effective presence of journalists on site prevents from a comprehensive and multilevel acknowledgment of facts: consequently, objectivity cannot be assured with certainty. Pure objectivity would mean a full knowledge of the events: although such a result is highly implausible, because the variables to take into account are so numerous that a perfectly total experience is impossible, fairness to a certain extent is effectively achievable. A comparison between the traditional attitudes the press had and the actual ones is incredibly meaningful in the matter here tackled. Once, journalists were apt to avoid every judgment about what they were recording. They were basically reporter in the literal meaning of the term: they used to report the facts as they were, as they occurred, as they developed. They did not used to emphasize or enforce information they learnt or data they collected, because their purpose was only recording. There were institutions, bodies and governments in charge of interpreting and analyzing facts. Conversely, today journalists are more inclined to feel free to label events. They have turned to a more moralistic and easily judging approach, where detached and objective analyses with impersonal viewpoint are scarcely to be found. Also, the distance allows more easily the concealment of interferences by more influential institutions. And here the issue of the subjective limitations comes up again. In fact, bodies, governments or private enterprises might hide behind the statements of the press, and handle journalists to precisely reach specific purposes<sup>251</sup>. Hunt reports the case of war stories as effective instance. They mirror the silencing or delegitimizing procedures

---

<sup>250</sup> Hunt, 2010, 123

<sup>251</sup> Finney, 2004, 3, 4

of all the elements challenging the dominant versions. This form of covering is eminently political: filled with patriotism, elite ideas are crucial for disseminating a States' successful image abroad. They often aim to put on the right and justice light the most powerful party. This tendency has been particularly stressed after the 9/11 attacks. Especially when the American army is involved, the purpose is to depict terrorists as evil and US army as good, keeping the traditional dialectic relation. Also, if we consider a more pragmatic example, even the gender division results evident. In fact, women are only introduced as victims, and they are seized in this role: because this is the role telling the right version of the story and the only one the public has to know<sup>252</sup>.

This approach sounds drastically problematic for its repercussions. In fact, in case that war crimes are taken into consideration, they might be totally misinterpreted, where the executor and the victim are assessed equally and on the same level, or worse, exchanged in their role: therefore, the executors acting correctly by making victims take on their own responsibility and ascertaining justice<sup>253</sup>. However, it is fundamental to underscore how changes have occurred over the years. They influenced the society on the whole, institutions included, and as a consequence they could not prevent from significant shifts in attitudes. Far from justifying the lack of objectivity or the allowance of conditioning with interferences the development of the history, this statement aims to raise awareness about the state of circumstances and clarifying the context<sup>254</sup>. Now that the comparison is clear, it is intuitive that, if the press kept the traditional behavior towards facts, it would help the activities of the International Committee of the Red Cross. In fact,

---

<sup>252</sup> Hunt, 2010, 121-123

<sup>253</sup> Finney, 2004, 4

<sup>254</sup> R.W.Gutman, *Spotlight on Violations of International Humanitarian Law: the Role of the Media*, in J.Carey, W.V.Dunlap, R.J.Pritchard (eds.), *International Humanitarian Law: Challenges*, Ardsley [New York]: Transnational Publishers, 2004. p.7

originally press used to aim to get and keep people informed about and control the occurring events. In particular, I am referring to the dissemination of the provisions constituting the International Humanitarian Law and the supervision of States' compliance. Considering the improvements of the media through technological advancement and development, this duty might be extraordinarily useful and helpful for the International Committee of the Red Cross <sup>255</sup>. However, in order to do so more efficiently, even the press ought to acquire an appropriate and sufficient expertise. In fact, no dissemination or supervision is possible if *a priori* there is no relevant knowledge. Once they mastered enough notions to avoid that inexperience damages their work, witnesses will acquire the appropriate value. Also: the more they are prepared about the topic, the more the public is allowed to learn. Thus, the effectiveness of both compliance and dissemination will increase. Such results would be even more influential since the fact that war crimes are highly appealing to the public and journalists behave consequently, making them one of the most looked for stories to be reported in the news. Therefore, there might be a wide and colorful inventory of manifold instances of war crimes, spread across the world and in different level of the societies. Accordingly, Gutnman writes about the try to start a project named *Crimes of War Project*, whose aim was to educate about the International Humanitarian Law. More specifically, it was structured on the active and multi-sectoral cooperation of journalist, scholars, the American University's Washington College of Law and its Department of Communications. The project was precisely addressed to the media personnel, in order to provide them with articles and photos whose topics concerned breaches of the International Humanitarian Law, with violations of the provisions included in the Geneva Conventions and the Additional Protocols: in particular, the themes

---

<sup>255</sup> Finney, 2004, 3

figured were crimes against humanity. The final huge inventory would have had to include a wide and as complete as possible range of examples, in order to give the basilar necessary preparation to deal with the matter. Without such a learning procedure, it is quietly obvious that the operative process would be compromised: they surely still could see and record events, because it is a mechanical skill with no need of any specific requirement, but they could not grasp anything they participate in correctly. Although personal inquiries might fill the potential gaps, the compensation could not be total for a matter of huger amount of necessary notions. There are clear and precise criteria defining a war crime, and only a relevant expertise may allow to understand them all. It is essential to give birth to awareness across the society, in order to grant a conscious witnessing of those infamous episodes. The following recording will definitely be useful for the later dissemination. Monitoring skills will be improved and the ability to also alert will be crucial to heighten the degree of wide public knowledge. This might be the auspicious beginning for universal compliance and awareness about not only the international community on the whole, but also the inner single State situation<sup>256</sup>.

I will end the paragraph with a final consideration about the value of images, especially because currently images and unspoken words have turned so extremely meaningful that they cannot be excluded from the ongoing study. Their power is dramatically influencing, because they could raise deeper emotions than words<sup>257</sup>. This statement is easily confirmed by the daily news, and the approach of some terroristic organizations, as it has been explained extensively in the previous paragraph. In order to provide with an evidence of this ability, it is sufficient to mention one of the most known picture of the Vietnam War,

---

<sup>256</sup> Gutman, 2004, 8, 10-12

<sup>257</sup> Hunt, 2010, 123, 124

and maybe one of the most famous war photo of all time. I am talking about the photo<sup>258</sup> depicting a bunch of children escaping from their houses, completely burnt by the napalm bomb American aircrafts threw shortly before, and used to do for a long period of the same war. Particularly noticed is the little girl screaming out loud, that later has been taken as the symbol of the sufferings due to that very kind of attack – the employment of a chemical weapons, and here it is clear that the example in the second chapter has not been chosen randomly. She explicitly shows her pain, and no confutations can be made to deny this claim. The emotional impact of the photo achieved such a high degree that it won both the Pulitzer Prize for Spot New Photography and the World Press Photo of the Year in 1973. The power of images is explained by the direct hit they can throw to the emotional status of persons, who personally interpret what is seen by listening to their own feelings. However, another aspect has to be highlighted: in fact, since we are talking about personal standpoint, the risk of wrong interpretations is open. Also, new technologies permit to the photographer to go even further. There are many procedures of editing picture, and in the next years they are likely to increase in number. Therefore, if previously, without a heavy editing, pictures could raise less guided feelings, now, and even more in the future, filters, easily altering the image, might control the reactions of viewers massively. They might boost the reality beyond its limits and provide with a nearly totally different scenario. As a result, lack, partial or total, of objectiveness might fluctuate in a wide range of possibilities from total adherence to reality to its complete opposite<sup>259</sup>. Above all, editors and the photo agency play a vital role definitely, because they are those who decide the guidelines photographers have to follow carefully. Photographers are free to choose

---

<sup>258</sup> "The Terror of War" by Nick Ut, *The Associated Press*

<sup>259</sup> Finney, 2004, 2, 5

the subjects of their work and give it through their personal lens, but without avoiding the rules established by their bosses. They can play with perspectives, lights, lines, contexts, buildings, grounds and all the other manifold compositional elements of the photo itself. These features have effectively a tremendous influence on the perception of the viewers: details are filtered by their multifaceted personalities too. On the whole, photos push reflection on the reality and allow a more free leeway of judgment: this is the original reason why representations might be incredibly powerful<sup>260</sup>.

---

<sup>260</sup> Hunt, 2010, 123, 124

### 3.5 Conclusions

The philosophical speculation has taken three big issues into consideration: as I said within the introduction, I touched on the limitations of cyberspace, the relationship torture, power and technique and the media related to the International Humanitarian Law. However, it is easily intuitive that the list is not exhaustive at all, and that many would be the potential issues included. Therefore, a couple of considerations are necessary before drawing appropriate conclusions. The first is related to the methodological approach of the study. It is obvious that the dissertation about the aforementioned themes might be extended nearly endlessly: in fact, the selection followed a criterion of usefulness for the analysis itself. The matters potentially might be further developed, but there have been limitations in terms of space and topic, in order not to end up off theme and stick to the subject of the inquiry. The second consideration is conversely related to the absence of some of the cultural changes that new military technologies have produced. The reason of such a choice is especially arising from the lack of enough space to tackle them properly, or, possibly a better clarification, to address the correct attention they deserve. However, the conclusion of the chapter might be a suitable opportunity to at least mention the topics I thought about but that I did not succeed in finding an adequate place. First of all I would have liked to take the gender perspective on war into consideration: in particular, the impact of newly produced technologies and the restructuration of the traditional image of the essentially masculine war. The text dealing with the matter is L.J.Shepherd (ed.) *Gender Matters in Global Politics, a feminist introduction to international relations*, London and New York: Routledge, Taylor & Francis Group, 2010. Within this interesting collection of essays, the themes of militarism, war on terrorism, cyborgs, masculinity and the

relation between sex and cyberspace are faced. Actually, in the research there have been, if only partially, a mention of the aforementioned themes, especially integrated in major ones. Especially, as for the limited and incorrect role in which women are usually limited, following the stereotypes<sup>261</sup>. Secondly, a more careful attention to diplomacy should be paid. In the chapter I have only said that it is pragmatically difficult to allow agreements when omnipotence - in this very case of technology - is established. As international relations student, diplomacy was supposed to be one of the major issues: however, it would be highly advisable to deserve an entire thesis on the theme, by providing with an accurate and fairly exhaustive research. In fact, it potentially might have a major and deep influence to the development and destiny of international politics, and consequently international relations. Thirdly, and finally, the status of the cyberspace would be dramatically fascinating to inquiry. It is effectively the product of human minds, an intellectual exercise of creativity and of high skilled competences. Therefore, a piece of research about the correct use of the cyberspace, it being to a certain extent intellectual property, with all the legal issues related, would be very stimulating to conduct. The inquiry might be a relevant and engrossing integration added to the final paragraph of the first chapter about the Law of the Commons applied to the cyberspace.

In conclusion, it is essential to repeat that even the aforementioned additional themes, here enlisted and very briefly developed, provide with only a partial frame of the wide theme that is the issues and transformations recently technologies military technologies cause. In fact, every time one might think about them, there is always the chance of new and considerate reflections to figure out. Thus, the picture that

---

<sup>261</sup> L.J.Shepherd (ed.) *Gender Matters in Global Politics, a Feminist Introduction to International Relations*, London and New York: Routledge, Taylor & Francis Group, 2010. pp.105, 116, 176, 326

has been depicted throughout the entire chapter was a personal and limited dissertation about a currently pressing theme, on which higher attention needs to be paid.

## Final Conclusions

The inquiry has now arrived at its end. All the points that have been taken on throughout the entire study might have been intuited even merely paying a careful attention to the news and with an appropriate knowledge of the international politics possibly. However, such a scientific work of can provide with adequate proofs to justify the matter certainly. The aim enounced at the beginning of the work was to shed clear light on the effects of potential impacts of the newly produced military technologies on the everyday life of us all humans and how our perception could have been positively or negatively contaminated. Thanks to all that have been disclosed until now, from the first to the last word, it has appeared evident how the need of clarification is eminently basilar. In order to achieve such results, an interdisciplinary and cooperated work is essential, for a comprehensive and actionable approach. With no awareness of it, only long time after I begun the research I surprisingly found out on the World Economic Forum website<sup>262</sup> that one of the priorities of the forum was the fourth industrial revolution, especially how to deal with its effects appropriately by constantly monitoring its development. Even though military technology was not the primary concern, it was mentioned the fact that no sharp delimitations between the civil and military field s for technology might be traced: therefore, the reciprocal effects were observable. If I should assess the outcome of my research, I would say that I succeeded in what I planned, because I found out the empirical evidence answering my former doubt about the influence of technology on human experience, providing with a proper justification too. Also, I realized the existence of implications that I actually could not even figure out. The most appropriate conclusions that I could ever write are the very avoidance of

---

<sup>262</sup> <<https://www.weforum.org/>>

drawing them. It would give a nonsense limitation to a topic like this, which conversely only needs to be left open. The advancement of technology, the fact that it is about to encompass our life totally without any exception, from the most usual duties to the possibility of an armed conflict, means that a further evolution is yet to come. The totalizing nature that has been postulated previously here strengthens tremendously the confirmation of technology's intrinsic dynamism, causing the instability of the system itself. Changes are very likely to occur, possibly transforming the reality that has already underwent former changes, and consequently communities and their own culture. As I wrote in the conclusions of the last chapter, many more topics might have been touched: through a constant reflection, multilevel relations, under uncountable and different connotations, linking ideas reciprocally nearly endlessly. I personally reckon that the thesis itself should serve as a humble springboard to make additional considerations spring out definitely. I would never have had the chance of tackling them all, both for a matter of space and conditions: as human being, I had not the ability of thinking about every change potentially occurring, because, as I repeated more than once throughout the inquiry, our condition is naturally and intrinsically limited.

## Bibliography

Advisory Service on International Humanitarian Law, *International Humanitarian Law and International Human Rights Law, Similarities and Differences*, International Committee of the Red Cross, 2003.

Advisory Service on International Humanitarian Law, *New Weapons*, International Committee of the Red Cross, Nov. 2001.

*Asia and the Middle East Lead Rising Trend in Arms Imports, US Exports Grow Significantly*, SIPRI, March 12<sup>th</sup> 2018.

<<https://www.sipri.org/news/press-release/2018/asia-and-middle-east-lead-rising-trend-arms-imports-us-exports-grow-significantly-says-sipri>>

K.P.Apuuli, *The Use of Unmanned Aerial Vehicles (Drones) in United Nations Peacekeeping: The Case of the Democratic Republic of Congo*, in "American Society of International Law", vol.18, Issue 13, June 13<sup>th</sup> 2014.

<<https://www.asil.org/insights/volume/18/issue/13/use-unmanned-aerial-vehicles-drones-united-nations-peacekeeping-case>>

J.Becker, S.Erlanger, and E.Schmitt. *How Russia Often Benefits When Julian Assange Reveals the West's Secrets*, in "The New York Times", Aug. 31<sup>st</sup> 2016.

<<https://www.nytimes.com/2016/09/01/world/europe/wikileaks-julian-assange-russia.html>>

J.M.Berger, *How ISIS Games Twitter*, in “The Atlantic”, June 16<sup>th</sup> 2014.  
<<https://www.theatlantic.com/international/archive/2014/06/isis-iraq-twitter-social-media-strategy/372856/>>

*Biological Weapons*, UNODA (United Nations Office for Disarmament Affairs), Dec. 14<sup>th</sup> 2017.  
<<https://www.un.org/disarmament/wmd/bio/>>

V.Boulanin, *Implementing Article 36 Weapon Reviews in the Light of Increasing Autonomy in Weapon Systems*, in “SIPRI Insights on Peace and Security”, No. 2015/1, Nov. 2015.

R.Browne, *U.S. Military Spending Millions to Make Cyborgs a Reality*, in “CNNPolitics”, March 7<sup>th</sup> 2016.  
<<http://edition.cnn.com/2016/03/07/politics/pentagon-developing-brain-implants-cyborgs/index.html>>

G.Chamayou, *Teoria del drone: principi filosofici del diritto di uccidere*, Roma: DeriveApprodi, 2014. Trad. di Marcello Tari.

*Chemical Weapons*, UNODA (United Nations Office for Disarmament Affairs), Dec. 14<sup>th</sup> 2017.  
<<https://www.un.org/disarmament/wmd/chemical/>>

B.Christensen, *Military Plans Cyborg Sharks*, in “Live Science”, March 7<sup>th</sup> 2006.  
<<https://www.livescience.com/603-military-plans-cyborg-sharks.html>>

C.Cole, *What’s Wrong with Drones?*, in “Drone Wars UK.net”, Oct. 2015.  
<<https://dronewars.net/2014/03/20/whats-wrong-with-drones/>>

S.Cosimi, *Quante sono le testate nucleari nel mondo*, in “Wired”, 8 Gen. 2016.

<<https://www.wired.it/attualita/politica/2016/01/08/testate-nucleari-mondo/>>

*DARPA Launches Biological Technologies Office*, in “DARPA”, 2014.

<<https://www.darpa.mil/news-events/2014-04-01>>

*DARPA Restructures/Creates New Offices*, in “DARPA”, 2012.

<[https://archive.is/20120708012812/http://findarticles.com/p/articles/mi\\_6712/is\\_n27\\_v171/ai\\_n28601257/](https://archive.is/20120708012812/http://findarticles.com/p/articles/mi_6712/is_n27_v171/ai_n28601257/)>

W.V.Dunlap, *Dissemination and International Humanitarian Law in Modern Social Conflict*, in J.Carey, W.V.Dunlap, R.J.Pritchard (eds.), *International Humanitarian Law: Challenges*, Ardsley [New York]: Transnational Publishers, 2004.

G.L.Dyndal, T.A.Berntsen, S.R.Johansen, *Autonomous Military Drones: No Longer Science Fiction*, in “NATO Review”, July 28<sup>th</sup> 2017.

<<https://www.nato.int/docu/review/2017/also-in-2017/autonomous-military-drones-no-longer-science-fiction/EN/index.htm>>

*Edward Snowden: Leaks That Exposed US Spy Programme*, in “BBC News”, Jan. 17<sup>th</sup> 2014.

<<https://www.bbc.com/news/world-us-canada-23123964>>

J.W.Finney, *Media Limitations in Reporting Crimes Against Humanity*, in J.Carey, W.V.Dunlap, R.J.Pritchard (eds.), *International Humanitarian Law: Challenges*, Ardsley [New York]: Transnational Publishers, 2004.

A.Fleurant, A.Kuimova, N.Tian, P.D.Wezeman and S.T.Wezeman, *The SIPRI Top 100 Arms-Producing and Military Services Companies, 2016*, SIPRI, Dec. 2017.

D.Garcia, *Future Arms, Technologies, and International Law: Preventive Security Governance*, in “European Journal of International Security”, vol.1, part 1, 2016, pp.94–111.

*Global Arms Industry: First Rise in Arms Sales since 2010, Says SIPRI*, SIPRI, Dec. 11<sup>th</sup> 2017.

<<https://www.sipri.org/media/2017/global-arms-industry-first-rise-arms-sales-2010-says-sipri>>

G.B.Gobeil, *New Technology, Same Old Strategy: Why Artificial Superintelligence Represents the Social Continuation of the US Quest for War Virtuosity*, in “Journal of Military and Strategic Studies”, vol.16, issue 2, 2015, pp.77-124.

G.Goisis, *La tortura: alcuni aspetti antropologici*, pp XXXV-LX, in L.Zagato, S.De Vido (a cura di), *Il divieto di tortura e altri comportamenti inumani o degradanti nelle migrazioni*, Padova: CEDAM, 2012.

R.W.Gutman, *Spotlight on Violations of International Humanitarian Law: the Role of the Media*, in J.Carey, W.V.Dunlap, R.J.Pritchard (eds.), *International Humanitarian Law: Challenges*, Ardsley [New York]: Transnational Publishers, 2004.

P.Harris, *Drone Attacks Create Terrorist Safe Havens, Warns Former CIA Official*, in “The Guardian”, May 6<sup>th</sup> 2012.

<<https://www.theguardian.com/world/2012/jun/05/al-qaida-drone-attacks-too-broad>>

*Health Aspects of Chemical and Biological Weapons*, Report of a WHO Group of Consultants World Health Organization, Geneva, 1970.

K.Hunt, *The ‘War on Terrorism’* in L.J.Shepherd (ed.) *Gender Matters in Global Politics, a Feminist Introduction to International Relations*, London and New York: Routledge, Taylor & Francis Group, 2010.

*Hybrid Insect MEMS (HI-MEMS)*, in “DARPA”.

<<https://web.archive.org/web/20110210141306/http://www.darpa.mil/mto/programs/himems/>>

International Committee of the Red Cross, *International Humanitarian Law, Answers to Your Questions*, Geneva: Feb. 2012.

International Committee of the Red Cross, Res.21, *Dissemination of Knowledge of International Humanitarian Law Applicable in Armed Conflicts*, 55th Plenary Meeting (7 June 1977), in *Protocols Additional to the Geneva Conventions of 12 August 1949*, Geneva, 1977, pp.106-07.

<<https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Article.xsp?action=openDocument&documentId=D690337F274D563EC12563CD0051EA92>>

A.Jacobsen, *Engineering Humans for War*, in “The Atlantic Monthly”, Sep. 23<sup>rd</sup> 2015.

<<https://www.theatlantic.com/international/archive/2015/09/military-technology-pentagon-robots/406786/>>

J.Law and I.Moser, *Cyborg*, in “International Encyclopedia of the Social & Behavioral Sciences”, Elsevier Science Ltd., 2001, pp.3202-3204.

J.A.Lewis, *Cyberwar Thresholds and Effects*, *Center for Strategic and International Studies* Copublished by the IEEE Computer and Reliability Societies, Sep./Oct. 2011.

M.Magistrone, *La Russia di Putin ha delle nuove (spaventose) armi nucleari*, in “Wired”, 2 Mar. 2018.

<<https://www.wired.it/scienza/lab/2018/03/02/russia-armi-nucleari/>>

M.F.Martin, *Vietnamese Victims of Agent Orange and US-Vietnam Relations*, *Congressional Research Service*, Report to United States Congress, May 28<sup>th</sup> 2009.

<<https://fas.org/sgp/crs/row/RL34761.pdf>>

D.Mertz, *Cyborgs*, in “International Encyclopedia of Communications”, John Wiley & Sons, Ltd. All, 2008.

<<http://onlinelibrary.wiley.com/doi/10.1002/9781405186407.wbiecc180/abstract>>

*Military Seeks to Develop 'Insects Cyborg'*, in “The Washington Times”, March 13<sup>th</sup> 2016.

<<https://www.washingtontimes.com/news/2006/mar/13/20060313-120147-9229r/>>

G.Mosca, *Il mercato delle armi continua a crescere*, in “Wired”, 22 Feb. 2017.

<<https://www.wired.it/attualita/politica/2017/02/22/mercato-armi-crescere/>>

A.Pace, *La spesa per le armi nel mondo è (di nuovo) in aumento*, in “Wired”, 8 Apr. 2018.

<<https://www.wired.it/attualita/tech/2016/04/08/spesa-armi-mondo-aumento/>>

P.J.Parks, *Cyberwarfare (Compact Research: the Internet)*, Referencepoint PR Inc, 2012.

R.C.Parks and D.P.Duggan, *Principles Of Cyberwarfare*, Copublished by the IEEE Computer and Reliability Societies, Sep./Oct. 2011.

*Profile: Edward Snowden*, in “BBC News”, Dec. 16<sup>th</sup> 2103.

<<http://www.bbc.com/news/world-us-canada-22837100>>

*Profile: Wikileaks Founder Julian Assange*, in “BBC News”, Feb. 5<sup>th</sup> 2016.

<<http://www.bbc.co.uk/news/mobile/world-11047811>>

N.Ronzitti, *Diritto internazionale dei conflitti armati*, 4. Ed., Torino: Giappichelli, 2011.

R.J.Rosen, *Science Non-Fiction: Rise of the Cyborg Snails*, in “The Atlantic Monthly”, March 13<sup>th</sup> 2012.

<<https://www.theatlantic.com/technology/archive/2012/03/science-non-fiction-rise-of-the-cyborg-snails/254443/>>

J.Rothwell, *Isil Releases Beheading Video Featuring Paris Attackers*, in “The Telegraph”, Jan. 24<sup>th</sup> 2016.

<<https://www.telegraph.co.uk/news/worldnews/islamic-state/12119003/Isil-releases-new-beheading-video-featuring-Paris-attackers.html>>

H.Shane, *This is ISIS's New Favorite App for Secret Messages*, in “The Daily Beast”, Nov. 17<sup>th</sup> 2015.

[<https://www.thedailybeast.com/this-is-isiss-new-favorite-app-for-secret-messages>]

L.J.Shepherd (ed.) *Gender Matters in Global Politics, a Feminist Introduction to International Relations*, London and New York: Routledge, Taylor & Francis Group, 2010.

L.V.Tarca, *Lo Spirito della tecnica: dal potere all'onnipotere* in T.Masini (a cura di) *Verità e negazione. Variazioni di pensiero*, Venezia: Cafoscarina, Sett. 2016.

L.V.Tarca, *Tortura, dolore, potere. Per una lettura orwelliana del tempo presente* in T.Masini (a cura di) *Verità e negazione. Variazioni di pensiero*, Venezia: Cafoscarina, Sett. 2016.

L.V.Tarca, *Tra animali e tecnoanimali, aspetti dell'evoluzione umana nel tempo a venire* in T.Masini (a cura di) *Verità e negazione. Variazioni di pensiero*, Venezia: Cafoscarina, Sett. 2016.

A.Teti, *Cyber intelligence e cyber espionage. Come cambiano i servizi di intelligence nell'era del cyber spazio*, in “Gnosis, Rivista Italiana di Intelligence”, Mar. 2013.

M.Townsend, *Terrorists 'Plot in Shadows of the Dark Net', Report Warns*, in “The Guardian”, April 8th 2018.

<<https://www.theguardian.com/uk-news/2018/apr/08/terrorists-plot-shadows-dark-net-report>>

K.Tsuneishi, *Unit 731 and the Japanese Imperial Army's Biological Warfare Program*, in “The Asia-Pacific Journal | Japan Focus”, Translated by John Junkerman, vol.3, Issue 11, Nov. 24th 2005.

<<http://apjff.org/-Tsuneishi-Keiichi/2194/article.html>>

S.Valesini, *Quante armi nucleari ci sono al mondo*, Wired, 9 Sett. 2016.

[<https://www.wired.it/attualita/politica/2016/09/09/quante-armi-nucleari-mondo/>>

United Nations Office of Geneva, *What are Biological and Toxin Weapons?*.

<[https://www.unog.ch/80256EE600585943/\(httpPages\)/29B727532FECBE96C12571860035A6DB?OpenDocument](https://www.unog.ch/80256EE600585943/(httpPages)/29B727532FECBE96C12571860035A6DB?OpenDocument)>

K.Volker, *What the U.S. Risks by Relying on Drones*, in “The Washington Post”, Oct. 26<sup>th</sup> 2012.

<[http://articles.washingtonpost.com/2012-10-26/opinions/35500650\\_1\\_drone-strikes-drone-attacks-guantanamo-bay](http://articles.washingtonpost.com/2012-10-26/opinions/35500650_1_drone-strikes-drone-attacks-guantanamo-bay)>

C.Von Clausewitz, M.Howard and P.Paret (Eds.), *On War*, dited and translated by M.Howard and P.Paret, New Jersey: Princeton University Press, 1989.

I.Wallerstein, *World-systems Analysis: an Introduction*, London: Duke University Press, 2004.

I.Wiesner, *A Sociology of the Drone*, in “Journal of Military and Strategic Studies”, vol.18, issue 1, 2017, pp.42-59.

## **Webliography**

Center for Transnational Law (CENTRAL).

<[https://www.trans-lex.org/910000/\\_/lex-specialis-principle/](https://www.trans-lex.org/910000/_/lex-specialis-principle/)>

Google Website.

<<https://www.google.it>>

International Committee of the Red Cross.

<<https://www.icrc.org/en/mandate-and-mission>>

International Committee of the Red Cross, *Customary IHL Database*.

<<https://ihl-databases.icrc.org/customary-ihl/eng/docs/Home>>

*Oxford Dictionary*, Oxford University Press, 2018.

<<https://en.oxforddictionaries.com/definition/>>

Telegram Website.

<<https://telegram.org>>

The Tech Terms Computer Dictionary Website.

<<https://techterms.com/definition/youtube>>

WikiLeaks Website.

<<https://wikileaks.org/What-is-Wikileaks.html>>

World Economic Forum Website

<<https://www.weforum.org/>>

YouTube Website.

<<https://www.youtube.com/intl/en-GB/yt/about/>>

### **Consulted Documents**

*“Convention (IV) respecting the Laws and Customs of War on Land and its annex: Regulations concerning the Laws and Customs of War on Land.”*. The Hague, Oct. 18<sup>th</sup> 1907.

*Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I.C.J. Reports, 1996.

*“Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I)”*. Geneva, June 8<sup>th</sup> 1977.

*“Statutes of the International Red Cross and Red Crescent Movement”*. Geneva, 1986.

*“Universal Declaration of Human Rights”*, Paris, 1948.